

11/9/92 - Stake Out Inspection (anytime)

PERMIT

INDEXED
BY 48628

SEWAGE DISPOSAL SYSTEM

A 21507

MARYLAND STATE DEPARTMENT OF HEALTH DISTRICT 4th

HOWARD COUNTY
BUREAU OF ENVIRONMENTAL HEALTH
313-2640

DATE 10/30/92

INDEXED

DATE SYSTEM APPROVED 4/1/93

SAND MOUND SYSTEM

INSPECTOR M. Ripkin

Paul Schissler/South Carroll Backhoe, Inc IS PERMITTED TO INSTALL X ALTER

ADDRESS 4410 Salem Bottom Road, Westminster, Maryland 21157 PHONE 875-4197

SUBDIVISION Forsythe Estates ROAD 14618 Monticello Drive LOT 11A

PROPERTY OWNER Sam Spicknall

ADDRESS _____
Number of bedrooms 3

Septic tank capacity 1500 gallons-top seamed and two chambered

Pump chamber 1000 gallons, top seamed

Sand Mound to be installed as per previously approved (6/7/91) Design Plans and specifications (as drawn by Jim Clise).

- Stake out initial sand mound site and call for field varification by local health dept.
- Rope off reserve sewage disposal area during entire construction phase.
- Provide a copy of recent seive analysis of sand mound sand for health department approval.
- 48 hours notice required prior to construction of sand mound.
- Any deviation from the approved plans must be verified and approved by this department prior to implimentation.

90' well to initial Sand Mound approved per Clise/RP based on Recent Field Survey (see attached SM Site Plan) 4/13/92 RP

PLANS APPROVED BY Ronald Pinkley DATE 10/29/92

COVER NO WORK UNTIL INSPECTED AND APPROVED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

NOTE CLEANOUT REQUIRED EVERY 70 FEET OF SEWER LINE AND/OR AT 90° SWEEPS IN LINES FROM HOUSE TO DRAIN FIELDS

NOTE ALL PARTS OF SEPTIC SYSTEMS (I.E. TANK DISTRIBUTION BOX TRENCHES) TO BE 100 FEET FROM WELL (UNLESS OTHERWISE SPECIFICALLY AUTHORIZED)

NOTE IF DEEP TRENCHES ARE USED CALL FOR INSPECTION BEFORE AND AFTER PLACING GRAVEL IN TRENCHES)

NOTE NO DRY WELL SHALL EXCEED 15 FOOT IN DIAMETER NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH

NOTE ALL PIPE FROM HOUSE TO SEPTIC TANK MUST BE CAST IRON OR SCHEDULE 40 PVC OR ABS

PERMIT VOID AFTER TWO YEARS

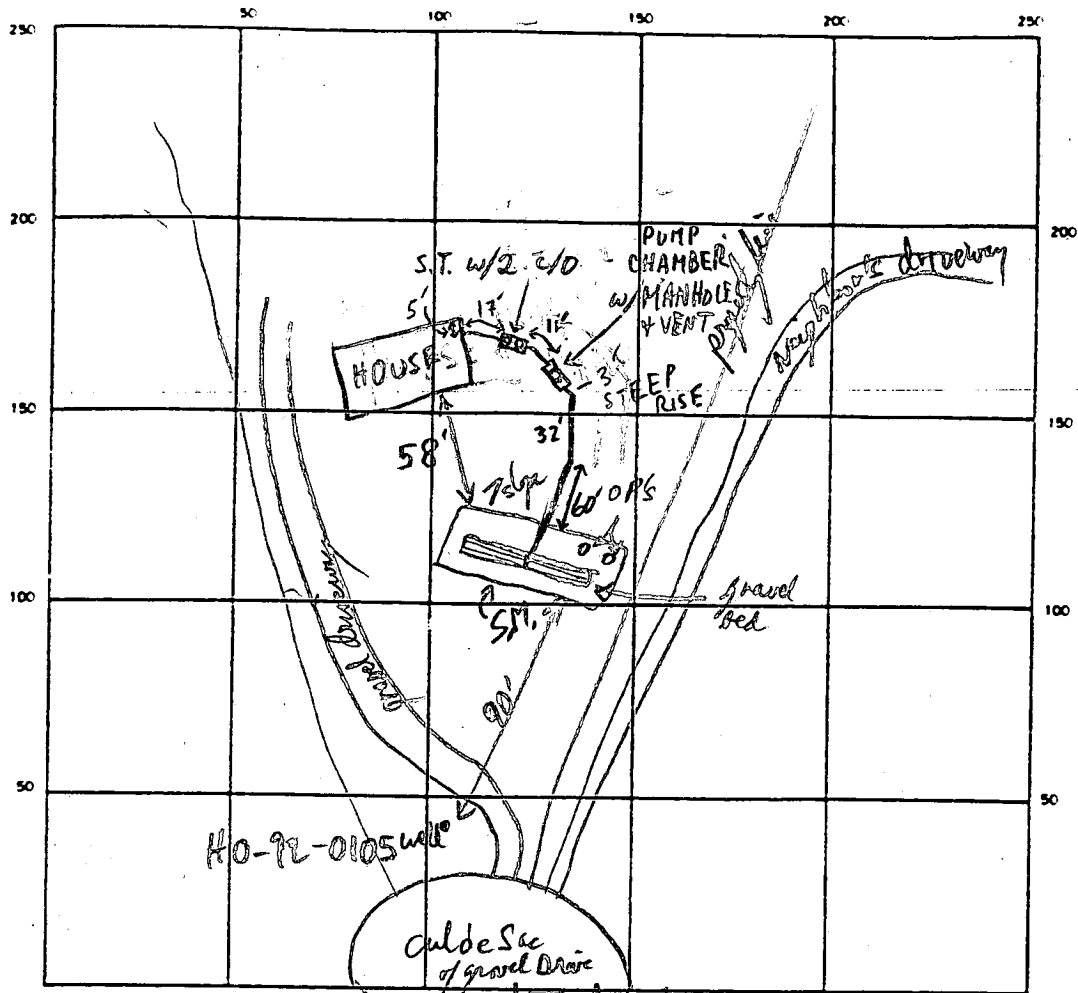
NOTE INSTALL STAND PIPE ON SEPTIC TANK AND DRY WELL STAND PIPES MUST BE 6 INCHES IN DIAMETER CAST IRON CONCRETE OR TERRA COTTA OR PVC OR ABS ACCEPTED. IF TOP OF SEPTIC TANK IS DEEPER THAN 3 FEET. MANHOLE TO GRADE REQUIRED

NOTE DISTRIBUTION BOXES MUST HAVE BAFFLES

*INSTALLER IS RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT

*CALL 461-9933 FOR INSPECTION OF SEPTIC SYSTEMS.

A
48628
92507



Pump Chamber - 1000 GAL - TOP SEAM

SEPTIC TANK LEVEL 1500 GAL - TOP SEAM
2 COMPARTMENT

CLEANOUTS 2 ON S.T.; ON PUMP CH.

DISTRIBUTION BOX LEVEL _____

DRAIN FIELD/TILE FIELD. DEPTH _____ FT TRENCH WIDTH _____ FT INLET DEPTH _____ FT
 EFFECTIVE GRAVEL DEPTH _____ FT TOTAL LENGTH _____ FT
 NUMBER OF TRENCHES _____ ONE SIDEWALL/BOTTOM AREA _____ SQ FT
 DRYWELL INSIDE DIAMETER _____ FT EFFECTIVE DEPTH BELOW INLET _____ FT
 ABSORBENT AREA _____ SQ FT

2ft sand depth under upper edge of gravel bed dependent on plans.

REMARKS Plowing with single moldboard plow (16" tire) throwing out uphill (out was a dark rich heavy loam) - OK 11/17/92

1st load of sand delivered - OK for S.T. Mounding of sand over gravel area began 11/17/92 R/P began building gravel bed in

shaped sand pile per spec. - OK 11/18/92 Red finished distribution pipes have perforation @ 3' intervals,

lines laid properly, gravel cover placed over pipes, the geotextile fabric then clay cap. Final grading of sand being completed

as left site. Plans to place topsoil + grass sod cover over over weekend. Tank + Pump chamber will be set at a later date

3/11/93 S.T. & P.C. OK - NEED TO SEE PUMP OPERATION MR 4/1/93 OP #2 - NO H₂O

OP #1 - NO H₂O; TURNUPS BOTH HAD H₂O - ALARM OK M. Riskin

DATE SYSTEM APPROVED 4/1/93

INSPECTOR

RECORDED
Liber 714, Folio 400

APPLICATION

A 21507

SEWAGE DISPOSAL TESTING

P _____

STATE OF MARYLAND - DEPARTMENT OF HEALTH AND MENTAL HYGIENE

HOWARD COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 476, ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 465-5000, EXT. 356

DISTRICT 4th

DATE 5/15/75

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Thomas G. Oyster

ADDRESS 2419 Reddie Drive, Wheaton, Maryland PHONE 949-2011
933-2454 (Jack Lewis)

PROPERTY LOCATION:

SUBDIVISION (Forsythe Heights) LOT NO. 11A

ROAD AND DESCRIPTION off Monticello Drive

SIZE OF LOT 2.2042 acres TYPE BLDG. 3 or 4 bedrooms
NUMBER OF BEDROOMS

IF NOT SINGLE RESIDENCE DESCRIBE _____

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE.

SIGNATURE OF APPLICANT /s/ Jack Lewis

APPROVED BY _____ FOR _____ DATE _____

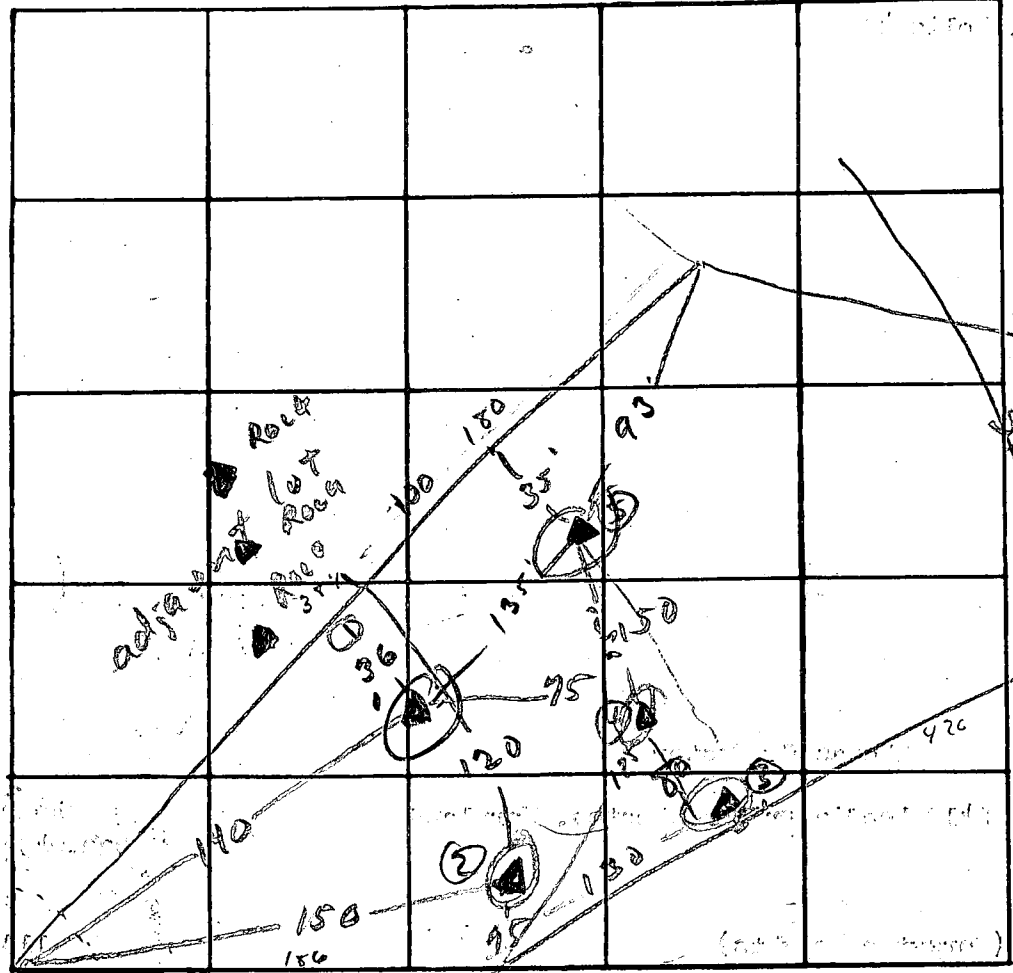
REJECTED BY [Signature] FOR Aay DATE 6/20/95
(KIND OF SYSTEM) (KIND OF SYSTEM)

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING Hard rock at or near surface

THIS IS NOT A PERMIT

11 A



INDICATE NORTH. - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
5/25/15	1	7' Rock					
	2	5' Rock					
	3	2' Rock					
	4	6' Rock					
	5	6' water					

REMARKS I do not believe this lot has sufficient good soil.

TYPE OF SOIL _____

TESTED BY Skinner & O'Neil ALSO PRESENT: P. Lendrum & Co.

*Mount Solon
Preliminary
April 25th 1988
9:30 AM*

APPLICATION

PERCOLATION TESTING

A 21507
P _____
DISTRICT 4TH
DATE 3-9-88

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE. 461-9933

REQUEST MOUND SYSTEM TEST

***LOT HAD BEEN PRE-PERKED 1/2/88 BY OLEN KETTERMEN. RESULTS: 1st HOLE 6 FEET TO ROCK SHELF; 2nd HOLE ROCK SHELF 8 FEET; 3rd HOLE LOOSE CLAY.
TO: THE COUNTY HEALTH OFFICER
ELLCOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER WILLIAM JESTES

ADDRESS 14634 MONTICELLO AVE COOKSVILLE MD PHONE 489-4809

PROSPECTIVE BUYER DEBBY JESTES

ADDRESS 5934 SETTER DR BALTIMORE MD 21227 PHONE 796-4721 w) 465-7700

PROPERTY LOCATION:

SUBDIVISION FORSYTHE ESTATES LOT NO. 11-A

ROAD AND DESCRIPTION _____

TAX MAP 8 PARCEL # 335

SIZE OF LOT 2.20 TYPE BLDG SINGLE FAMILY DWELLING
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE

FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY

WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

William M. Jestes
(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING 4-22-88 Approved for MOUND OVER ROCK - 30-60 min

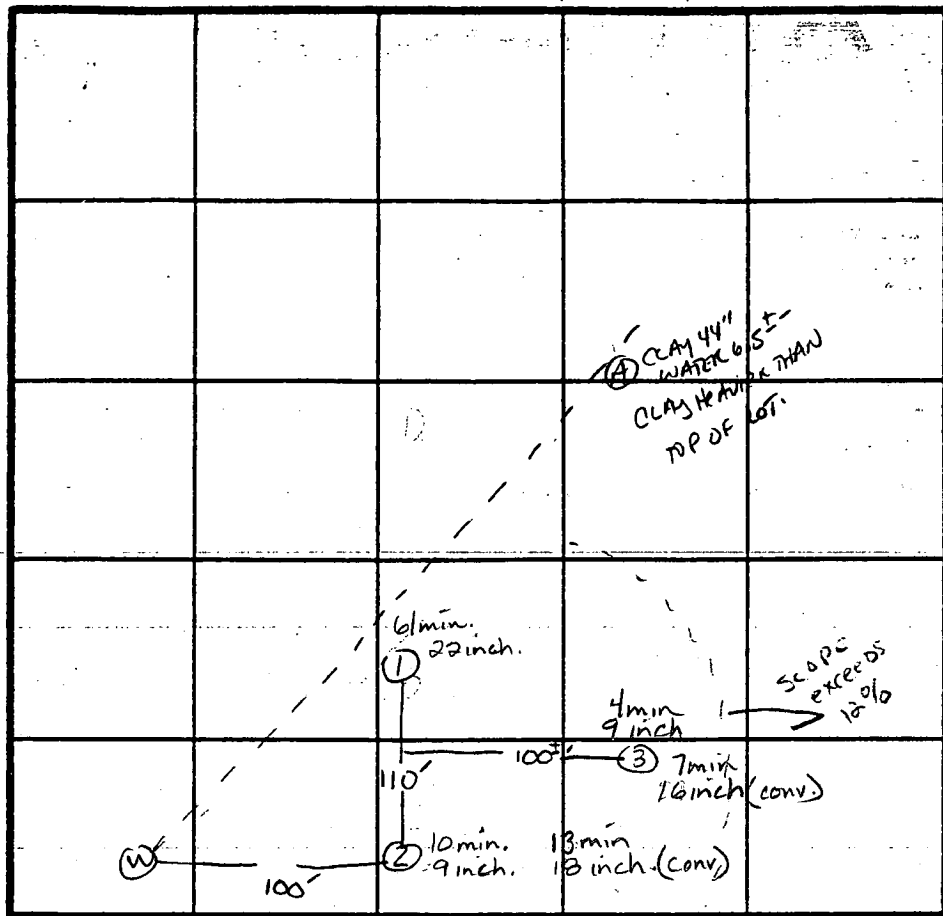
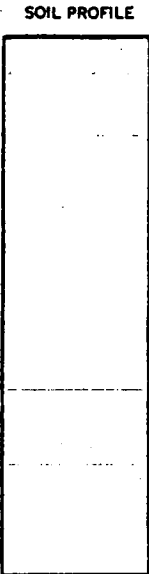
PERC when STATE APPROVED. S. Allen

HD-216

THIS IS NOT A PERMIT

ATTACHED: TOPOGRAPHY PLAT, TAX MAP, AERIAL VIEW OF PROPERTY, GROUNDS PHOTOS

A21507



Sand - 19 inches
 Bottom - 5 inches below grade
 Rock at 29 inches

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.
 TO MONTICELLO DR. RIGHT OF WAY

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/25/88	1 INFILTROM 1 V	22" 8'4"	11:31	12:30	12:30	1:31	1st 59 min 2ND 61 min
	CONVANT	18"	11:39	11:47	11:47	12:00	13 MIN
	2 INFILTROM	9"	1:32	1:38	1:38	1:48	1st 6 min 2ND 10 min
Rx at 2.7 ft	2 V	STRUCTURED ROCK AT 31-33"					
Rx at 2.4 ft	3 CONVANT	16"	11:47	11:52	11:52	11:59	7 MIN
	3 V	STRUCTURED ROCK AT 29"					
	3 INFILTROM	9"	1:52	1:56	1:56	2:00	1st 4 min 2ND 4 min

4/25/88 OK FOR MOUND OVER ROCK 30-60 MIN PERC WHEN STATE APPROVED. SAME SEE MORE SPECIFIC SOIL DESCRIPTION
 TYPE OF SOIL Chester Gravelly Loam
 SITES FOR PROFILES

TESTED BY S. Abel ALSO PRESENT MS. JESTES
 MK. JESTES (FATHER)

2-27-91
10:00am

APPLICATION

PERCOLATION TESTING

A 21507

P _____

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 461-9933

DISTRICT _____

DATE _____

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Debbie Jester Busbei

ADDRESS 9399 Oak Street, N.E., PHONE 813-577-9879
St. Petersburg, FL 33702

PROSPECTIVE BUYER _____
ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION Forsythe Estates LOT NO. 11A Retest Sand Mound
ROAD AND DESCRIPTION Monticello Road

TAX MAP 8 PARCEL # 335

SIZE OF LOT 2.2 acres TYPE BLDG SFD
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

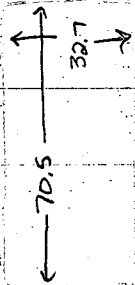
REASONS FOR REJECTION OR HOLDING 2-27-91 Pending hole locations and sand mound design proposal. JEN

HD-216

THIS IS NOT A PERMIT

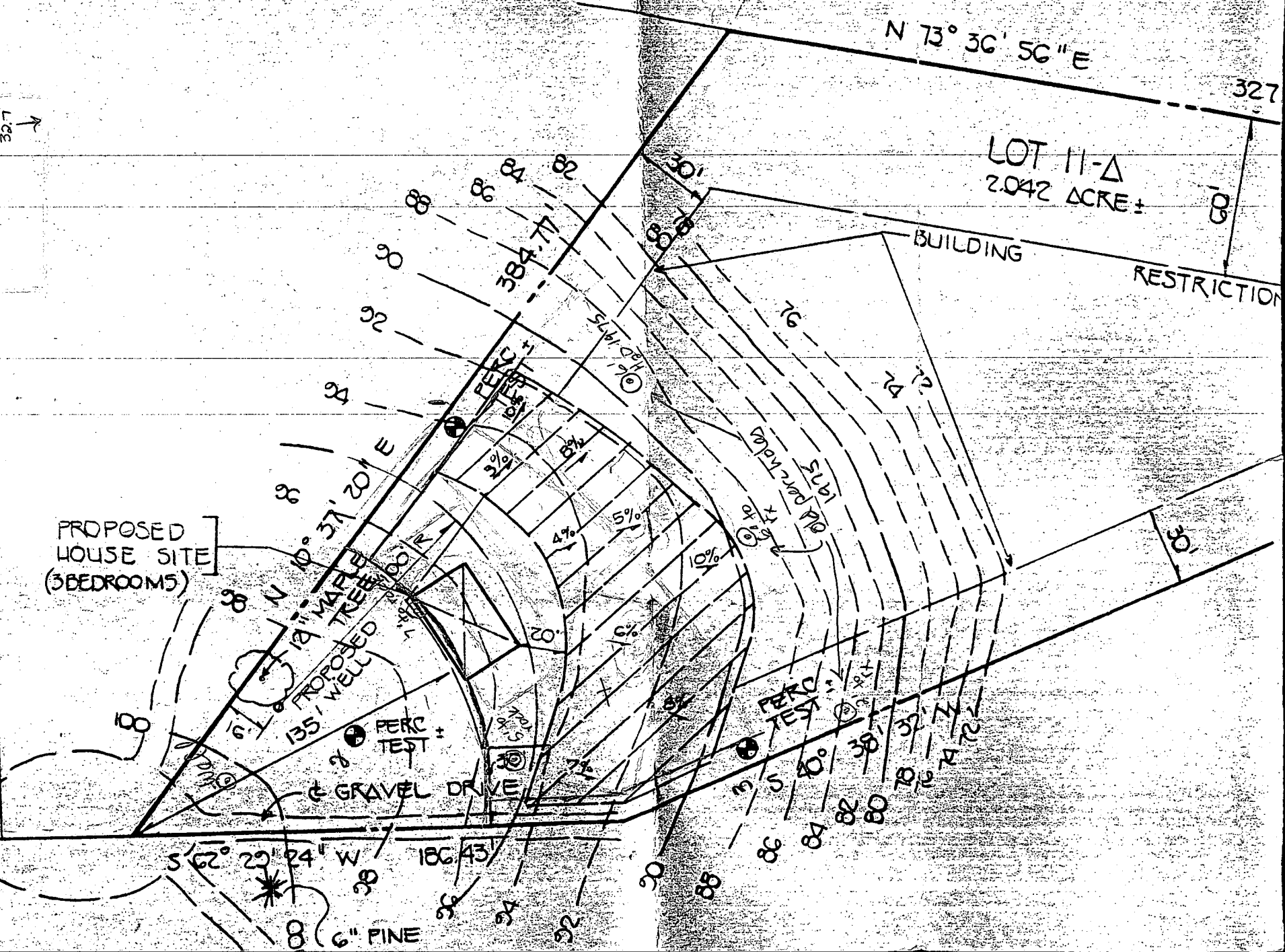
Scale
1" = 50'

Dimensions of
sand mound



Forsythe Estates
LOT 11A

PROPOSED
HOUSE SITE
(3 BEDROOMS)



N 73° 36' 56" E

327

LOT 11-A
2.042 ACRE ±

BUILDING

RESTRICTION

PROPOSED
HOUSE SITE
(3 BEDROOMS)

19" MAPLE
PROPOSED TREE

PERC TEST

GRAVEL DRIVE

6" PINE

PERC TEST

SUBI
10' x 10' x 10'

S 62° 23' 24" W 186.43'

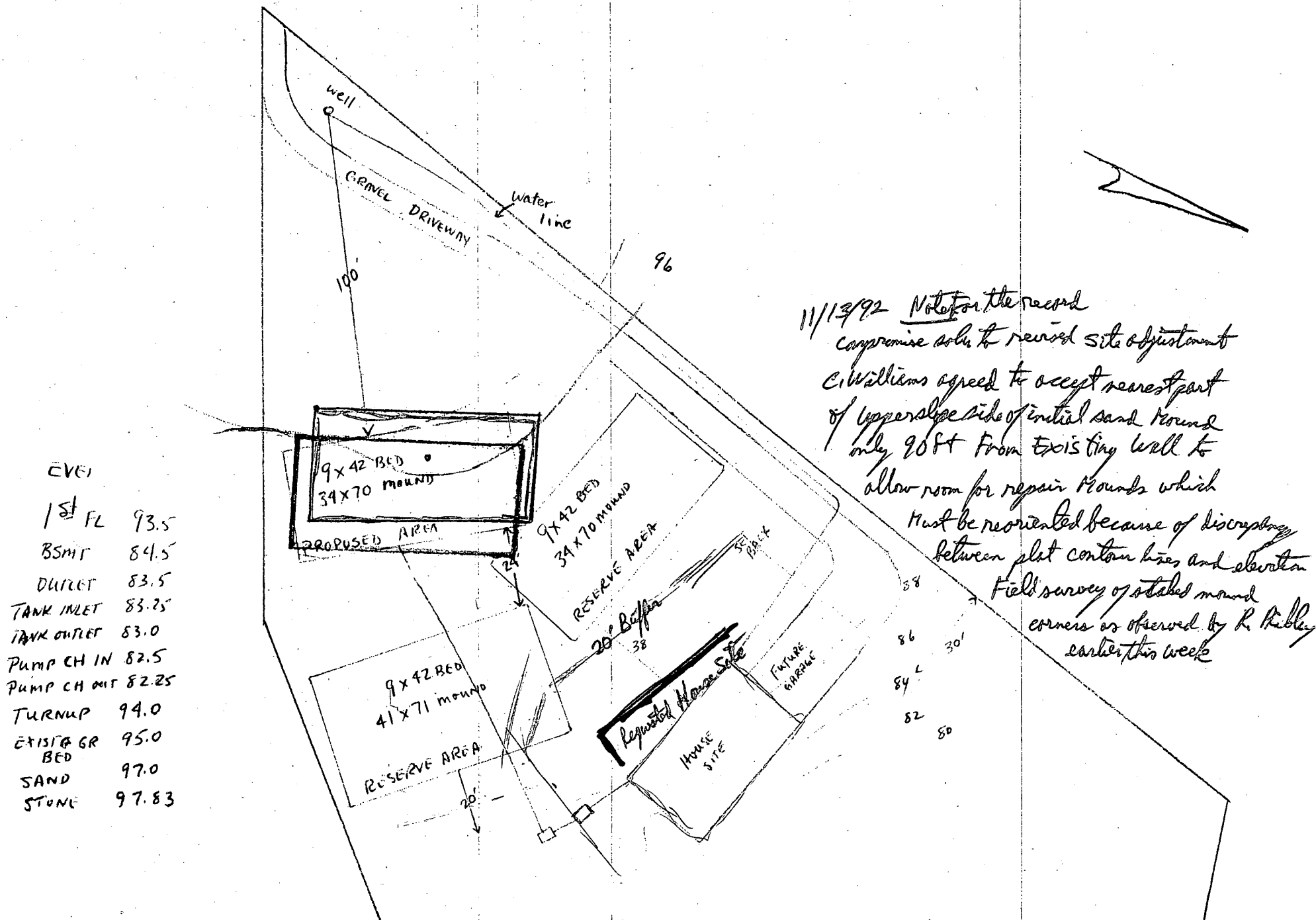
384.77'

BUILDING

RESTRICTION

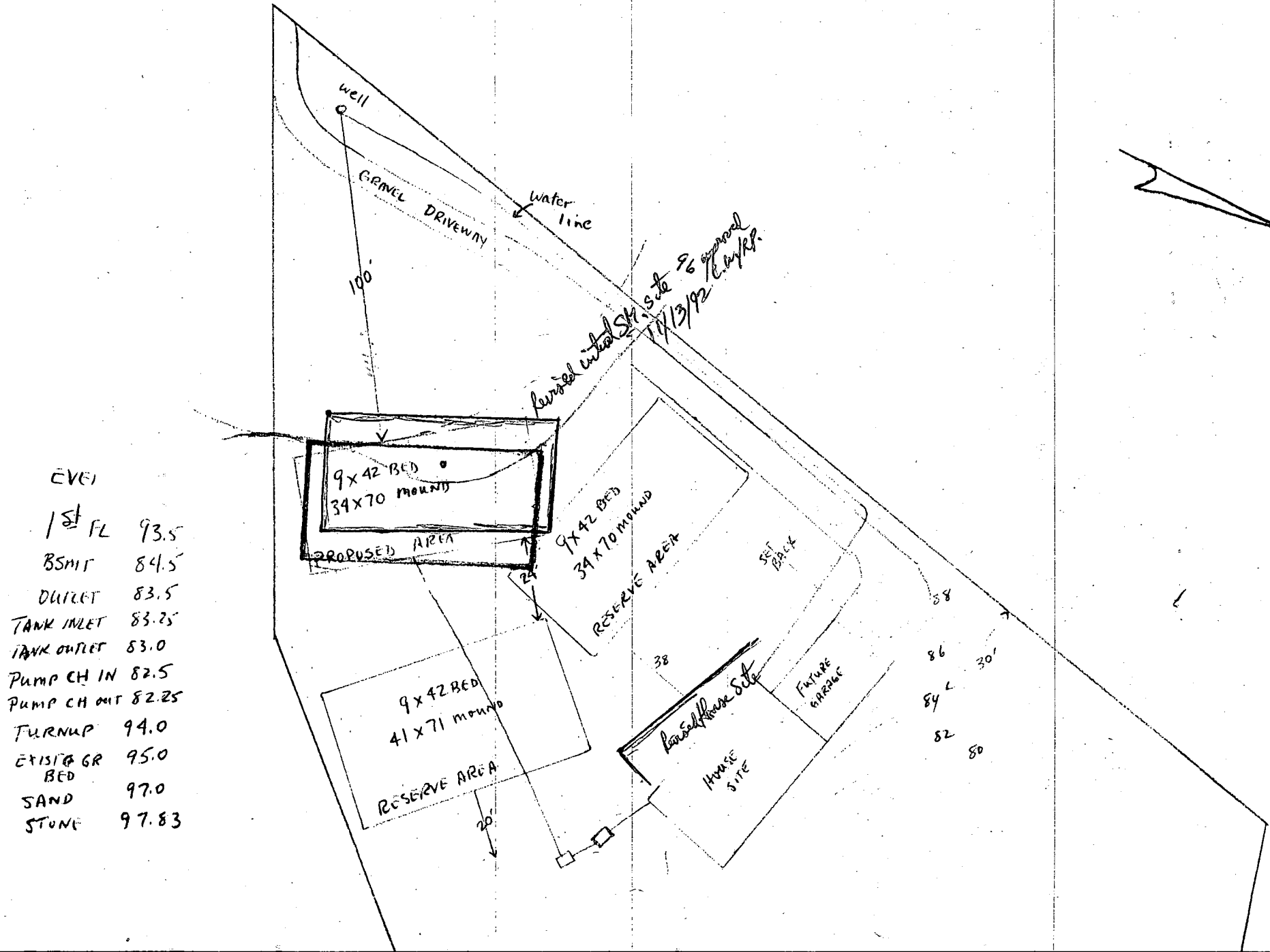
UPDATED - to be filed with permit application

Spicknall Job
14018 Monticello Ave
Cocksville, MD 21723



UPDATED - to be filed with permit application

Spicknall Job
 14618 Monticello Ave
 Cocksville, MD 21723



EVEI	
1st FL	93.5
BSMIT	84.5
DUCKET	83.5
TANK INLET	83.25
TANK OUTLET	83.0
PUMP CH IN	82.5
PUMP CH OUT	82.25
TURNUP	94.0
EXISTING GR BED	95.0
SAND	97.0
STONE	97.83

Revised initial SH site 8/6 approved 11/13/92 C. By R.P.

Lot 11-A Forsythe Estates
4th Election District
Howard Co., MD

SPECIFICATIONS
SAND MOUND

1. Design Criteria

Design Flow - 450 GPD
1 - 1500 Gal. Compartmented Septic Tank (Top Seam)
1 - 1,000 Gal. Pump Chamber (Top Seam)
75 Gal. Dose @ 60 GPM
Bed Area - 9' x 42' = 378 Sq. Ft.
Mound Area - 35' x 70' = 2450 Sq. Ft.
TDH - 10.6'

2. Sewage Treatment

One 1500 gallon compartmented top-seam septic tank is to be installed in series with a 1,000 gallon top-seam pump chamber. The pump chamber is to provide 20" of depth for pump elevation and submergence, 3" for pump cycle dose, and 6" for the high water alarm. The additional capacity of the pump chamber to the inlet invert will provide one day's flow of emergency storage above the high water alarm.

The above capacities and tank measurements and elevations shown on the drawing are based upon top-seam septic tanks and pump chambers as manufactured by Mayer Bros., Inc., Elkridge, MD (301) 795-1434.

3. A quick disconnect union and gate valve are to be provided on the pump discharge line as shown on the drawing.

4. Pressure piping from the pump chamber, including the manifold, is to be 3" Schedule 40 PVC.

5. Distribution laterals are to be 1" Schedule 40 PVC.

6. The pressure supply line, from the pump chamber to the absorption bed, is to be installed with a continuous slope back to the pump chamber to assure complete drainage of effluent from the supply line following each pump cycle.

7. A submersible pump to remove 60 GPM against 10.6' TDH is to be provided. The pump should be a Goulds Model WE 0311M, 1/3 hp, 115 volts, single phase, or equal. The pump control

Specifications
Sand Mound
Lot 11-A Forsythe Estates
Howard Co., MD

-2-

box is to be located above ground in a weatherproof enclosure or in the house.

8. The high water level sounding alarm is to be on a separate electrical circuit. The alarm is to be located in the house.

9. Sand is to have an effective size between 0.25 and 0.50 mm with a uniformity coefficient no greater than 3.5. A list of suppliers of approved sand is available upon request from the Division of Residential Sanitation, MD Department of the Environment.

10. Gravel for the bed is to be 3/4" to 2" in diameter, washed and free of fines. Gravel is to be inspected and approved prior to placement. Following covering of the laterals with gravel, a layer of geotextile fabric is to be applied. Crushed limestone is not an acceptable substitute for gravel.

11. A test of the pumping system and distribution piping is required prior to covering the system.

12. Each 1" lateral is to be 19'6" long with six (6) perforations 5/16" in diameter spaced 3'6" apart. A turn-up, as shown on the drawing, is to be provided on the extreme end of the laterals farthest from the pump. The other four laterals are to terminate with an end cap, perforated as shown on the drawing.

13. The attached construction procedures as prepared by the Division of Residential Sanitation, MD Department of the Environment, are included as a part of these specifications.

5-29-91 4:15 pm

Called Jim Clise re. Forsythe Est. Lot-11A

Need 2% slope 10 ft in front of the tank from the house. Currently 13% drop.

Need statement that all wells & septic within 100 ft of property lines have been shown.

Need to delineate SDA and add note for the standard sewage easement.

Clise stated that no streams or ponds are within 100 ft of the SDA.

Need Health Officer signature block if client wants a signed approval.

JENadeau

Forsythe Estates Lot-11A
Monticello Drive

Chronological
Summary

Sand Mound Proposal

4-25-88 Original perc tests performed
by S. Abel

5-4-88 Letter sent to D. Jester notifying
owner that state will not allow
sand mounds over rock

3-7-90 Letter from D. Jester requesting
interpretation of regulation

6-27-90 Meeting with D. Jester and requested
additional information to continue review.

10-18-90 Telephone call from Clayton Hemp of
Amer. Properties re: if lot was approved
for sand mound. Requested more information
(see letter dated 6-27-90)

1-11-91 Received septic system plan from FC&C
No sand mound details.

1-23-91

Meeting with ~~some~~ Residential Sanitation and C. Hemp re: feasibility of project

1-25-91

Telephone call from D. Busbei, owner. Discussed necessity for engineer to design sand mound.

1-28-91

Met C. Hemp on-site to confirm perc hole locations and site suitability.

2-11-91

Telephone call ~~Met~~ with Jim Clise / engineer and discussed current information in file.

2-12-91

Met with J. Clise. Clise proposed additional perc testing to move SDA downhill and allow house site higher than SDA.

2-27-91

Additional percolation testing with sand mound evaluation

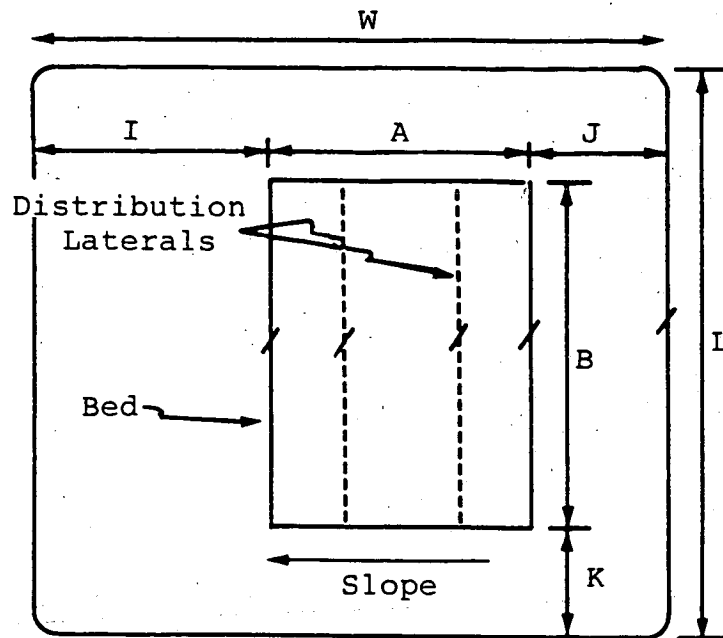
3-15-91

Letter requesting percolation certification plan prepared but not sent

- 3-18-91 Received sand mound design
and percolation test location plan
- 3-21-91 Preliminary review of plan & details.
- 4-29-91 Telephone call from C. Hemp. Hope
to review plans by end of week. Busy
time with wet season field work.
- 5-15-91 Telephone call from C. Hemp. Craig
Williams left message for engineer to
separate percolation certification from
septic design details if immediate
Health Officer signature is requested.
Otherwise a week or more will be
necessary to finish septic design details.
Percolation plan review completed. Need changes.
- 5-20-91 Craig Williams discussed percolation
plan detail with J. Clise. Committed
J. Nadeau to review sand mound septic
design asap (on leave through 5-27-91)
- 5-29-91 Review of septic system design completed
and discussed with C. Williams
Notified J. Clise of needed changes.

Forsythe Estates Lot-11A
 Monticello Road

SAND MOUND
 Plan View



- 9 ft A = Bed Width (15 ft max)
- 42 ft B = Bed Length (21 ft to 101 ft)
- 13.8 ft K = Sideslope Setback
- 9.9 ft J = Upslope Setback
- 16.5 ft = 17.6 ft I = Downslope Setback
- 35 ft W = Total Width of Mound
- 70 ft L = Total Length of Mound (20 ft to 32 ft + B)

FIGURE 3.2 - DESIGN WORKSHEET - PLAN VIEW

5-15-91 Review of mound size and location ok. Need percolation certification drawing. JEN

Forsythe Estates Lot-11A
 Monticello Road

TABLE 3.1

EQUATIONS FOR CALCULATING SAND MOUND DIMENSIONS

$$\text{Absorption bed ft.}^2 (A \times B) = \frac{450 \text{ gpd}}{1.2 \text{ gpd/ft.}^2} = \underline{375} \text{ ft.}^2$$

$$\text{Bed length (B)} = \underline{42} \text{ ft. (21 ft. to 101 ft. dependent on site)}$$

$$\text{Bed width (A)} = \frac{\text{Bed } 375 \text{ ft.}^2}{B \ 42 \text{ ft.}} = \underline{9} \text{ ft. (15 ft. or less)}$$

$$\text{Upslope sand fill depth (D)} = 48 \text{ in.} - \overset{24 \text{ in.}}{Z \text{ in.}} = \underline{24} \text{ in. (12 in. min.)}$$

$$\text{Downslope sand fill depth (E)} = [12 A \times \overset{9}{\%} \text{ slope}] + \overset{6}{D} \text{ in.} = \underline{30.5} \text{ in.}$$

$$\text{Cap + topsoil at bed center (H)} = \underline{18} \text{ in.}$$

$$\text{Cap + topsoil at bed edge (G)} = \underline{12} \text{ in.}$$

$$\text{Total Bed Depth (F)} = \underline{10} \text{ in.}$$

$$\text{Sideslope setback (K)} = \frac{\overset{24}{(D + E)} + 28 \text{ in.}}{2} \times 3 = \underline{166} \text{ in. } 14 \text{ ft}$$

$$\text{Upslope setback (J)} = (22 \text{ in.} + \overset{24 \text{ in.}}{D}) \times 3 \times \overset{0.86}{\text{upslope corr. factor}} = \underline{119} \text{ in. } 10 \text{ ft}$$

$$\text{Downslope setback (I)} = (22 \text{ in.} + \overset{30.5 \text{ in.}}{E}) \times 3 \times \overset{1.22}{\text{downslope corr. factor}} = \underline{192} \text{ in. } 16 \text{ ft}$$

$$\text{Total Width of Mound (W)} = 12A + \overset{9}{J} + \overset{119 \text{ in.}}{I} = \underline{419} \text{ in. } = 35 \text{ ft}$$

$$\text{Total Length of Mound (L)} = 12B + \overset{42}{K} + \overset{166 \text{ in.}}{K} = \underline{836} \text{ in. } = 70 \text{ ft}$$

Lot-11A Forsythe Estates

4-29-91

6% slope 24 inches to rock (use 32 ft added to mound length) Limiting conditions -
Bed length = 42 ft (+ 32 ft = 74 ft.: using 70 ft mound length)
Bed width = $\frac{375 \text{ sq ft}}{42 \text{ ft}} = 8.9 \text{ ft.}$: using 9 ft.

Upslope sand full depth = 48 in - 24 in = 24 in.: using 24 in
Downslope sand full depth = (9 ft x 6%) + 24 in
= 30.48 = 30.5 in.: using 30.5 in

Side slope setback = $\left[\frac{(24 \text{ in} + 30.5 \text{ in})}{2} + 28 \text{ in} \right] \times 3 = 165.75 \text{ in}$
∴ using 166 in

Upslope setback = (24 in + 22 in) 3 x 0.86 = 118.7 in
∴ using 119 in

Downslope setback = (30.5 in + 22 in) 3 x 1.22 = 192.15 in
∴ using 192 in

Mound width = 119 in + 192 in + 108 in = 419 in
34.9 ft.: using 35 ft

Mound length = 166 in + 166 in + 504 in = 836 in
69.7 ft.: using 70 ft

**SANITARY/ENVIRONMENTAL
ENGINEERING, INC.**

1414 Washington Road
Westminster, Maryland 21157

JOB Lot 11 Forsythe Estates

SHEET NO. 1 OF 2

CALCULATED BY JDC DATE _____

CHECKED BY _____ DATE _____

SCALE Sand mound

3 bd + m @ 150 = 450 gpd ✓ 6% Slope (avg)
10% Repair area

Bed Area - 450 / 1.2 = 375 Sq. Ft. min.

Bed width = 9' ✓ Length = 42' ✓ Area = 378 Sq. Ft.

Lateral total = 42' - 1' = 41' (use center manifold)

Lateral length = 41 / 2 = 20.5' app. (lateral length adjusted pp 4.2.5)

3 rows - Space between laterals = 3' ✓

5/16" perforations @ 42" o.c

Lateral Q = 1" ✓

Perforations / lateral = 0.5 x 42' + 3.5' = 6 / lateral

Ince main + manifold = 3" Q ✓

Distance from manifold to 1st perforation

$$\frac{(0.5 \times 42') - (5 \times 3.5')}{2} = 2'-0" \quad 1'-9"$$

Sand depth = 24" up side = 24 + (0.06 x 10.8) = 30.5" down side

Mound Size

side slope $\left(\frac{24 + 22}{2} + 28 \right) (3) = 165.8" = 13'-10" \text{ min } (14')$

up slope $24 + 22 \times 3 \times 0.86 = 119" = 9'-11" \text{ min } (10')$

Down slope = 30.5 + 22 x 3 x 1.22 = 192" = 16'

Mound width = 9' + 10' + 16' = 35' ✓

Mound length = 42' + (2 x 14') = 70' ✓

**SANITARY/ENVIRONMENTAL
ENGINEERING, INC.**

1414 Washington Road
Westminster, Maryland 21157

JOB Lot 11 A Forsythe Estates

SHEET NO. 2 OF 2

CALCULATED BY JDC DATE _____

CHECKED BY _____ DATE _____

SCALE SAND MOUND

Location of first lateral perforation (See 4.2.5 Design Manual)
 $(0.5 \times 42') - (5 \times 3.5') = 2'$

@ 42" between perforations and ending lateral at last perforation - lateral length = $2' + (5 \times 3.5') = 19.5'$

Dose
 $450 / 6 = 75 \text{ gal} / \text{hr}$

laterals - $5 \times 6 \times 19.5' \times 4.5 \text{ gal} / 100' = 26.3 \text{ gal}$

Force Main + Manifold = $70' \times 38.4 / 100' = 26.9$

Dose = $75 \text{ gal} = 10 \text{ cu ft}$ 53.2 54.6 gal
 Pump chamber area = 40 sq. ft. $\therefore \text{dose} = 0.25' = 3"$

Rate = $36 \times 1.63 \text{ gpm} / 5/16" \text{ perforation at } 2' \text{ head} = 58.7 \text{ SPM}$

TDH
 Elevation Difference = $95.0 - 88.91 = 6.09'$ 6.08

Distal head 2.00 ✓

Friction loss -
 2" = $7' + \text{union} + 3 \times 90^\circ + \text{gate valve}$
 $7' + 2' \quad 21' + 1.3 = 31' \checkmark$

3" = $70' + 1 \times 45^\circ + 3 \times 90^\circ$
 $70' + 6' + 30 = 106' \checkmark$

$F = 0.0984 \times \frac{59.185}{2067} \times 4.87 = 5.4' / 100'$ $5.4 \times 0.31 = 1.68'$ 1.67

$F = 0.0984 \times \frac{59.185}{3.069} \times 4.87 = 0.79' / 100'$ $1.06 \times 0.79 = 0.83$ 0.94

TDH = 10.6' 10.59'

Forsythe Estates Lot-11A
Septic System Design Review

5-28-91

1/3

Design flow: 450 gpd
Absorption area required: 375 sq ft
Absorption bed: 9 ft x 42 ft

Center manifold used

$$\text{Lateral length} = \frac{42 \text{ ft} - 1 \text{ ft}}{2} = 20.5 \text{ ft}$$

$$\text{Lateral spacing} = \frac{9 \text{ ft}}{3} = 3 \text{ ft}, 3 \text{ rows}$$

Perforations 5/16 inch, 42 inches on center

$$\text{Perforations} = \frac{0.5 \times 42 \text{ ft}}{3.5 \text{ ft}} = 6 \text{ perforations/lateral}$$

Distance between manifold & 1st perforation:

$$\frac{0.5 \times 42 \text{ ft} - [(6-1) \times 3.5 \text{ ft}]}{2} = \frac{21 - 17.5}{2} = 1.75 \text{ ft} \quad (1 \text{ ft } 9 \text{ in.})$$

Lateral diameter = 1 inch (sch 40 PVC)

Manifold & force main diameter = 3 inches (sch 40 PVC)

Pumping Design

$$\text{Dose minimum} = 450 \text{ gpd} / 6 = 75 \text{ gpd}$$

$$\text{Force main \& manifold} = \frac{70 \text{ ft} \times 38.4 \text{ g}}{100 \text{ ft}} = 26.9 \text{ g}$$

64 ft of 3 in PVC, 6 ft of 2 in PVC inside pump pit

$$\text{Laterals} = 5 \times 6 \times 20.5 \times \frac{4.5 \text{ g}}{100 \text{ ft}} = 27.7 \text{ gal}$$

$$\underline{54.6 \text{ gal}}$$

Assume 75gpd dose minimum

Pumping chamber

One day storage capacity = 450 g

Dose = $\frac{75g}{}$

Total 525 g capacity

Flow = 36 perforations \times 1.63 gpm / (for 5/16 in hole) w/ 2 ft head = 58.68 gpm

Design head

Elevation difference $95.0' - 88.92' = 6.08$ ft

Static head = 6.08 ft

Distal end head = 2.00 ft

? Friction loss at 59 gpm flow (unclear as to how engineer's figures were achieved)

Pump must deliver 58.7 gpm at 10.59 ft of head.

Pump needed is WPO3, 1/3 HP. Goulds Model 3870

Horse power = $\frac{\text{flow} \times \text{tot. dyn. head} \times \text{spec gravity}}{3960 \times 0.4}$

$$= \frac{58.7 \text{ gpm} \times 10.59 \text{ ft} \times 1}{1584}$$

$$= 0.39 \text{ HP}$$

Float Switch Adjustment in Pump Chamber

Distance btwn pump on & pump off float = dose

$$d = \frac{(D) \times 231}{A \times \text{sec area (in}^2)}$$

$$d = \frac{75 \text{ gal} \times 231 \text{ in}^3/\text{gal}}{5760 \text{ in}^2}$$

$$d = 3.01 \text{ in}$$

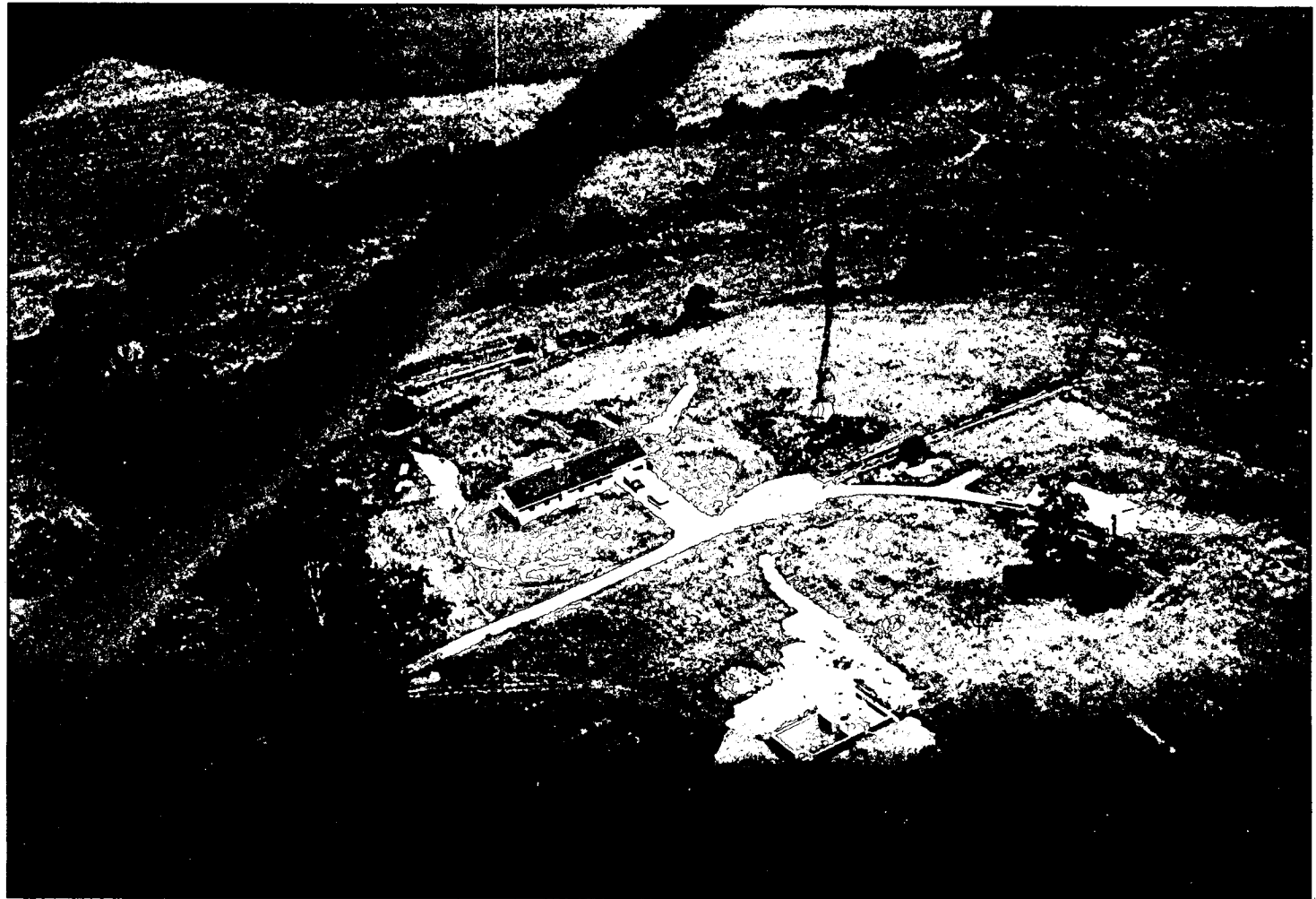
Assume pump chamber
is 4 ft deep x 10 ft long
= 40 sq ft x 144 in = 5760 in²

Distance btwn high water alarm & pump chamber inlet =
volume of 1 day's design flow

$$r = \frac{(R) \times 231 \text{ in}^3/\text{gal}}{A \times \text{sec area (in}^2)}$$

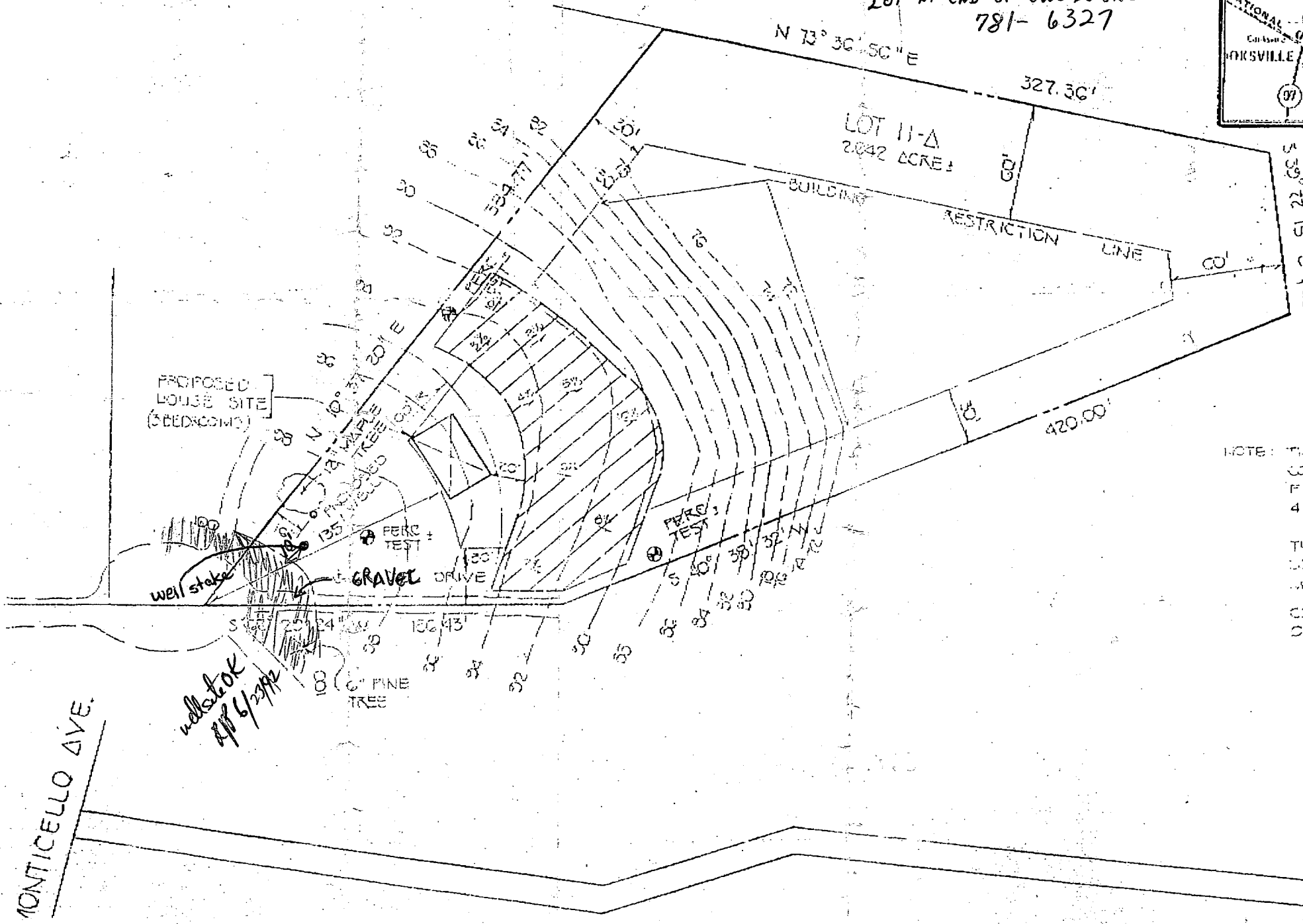
$$r = \frac{450 \text{ gal} \times 231 \text{ in}^3/\text{gal}}{5760 \text{ in}^2}$$

$$r = 18.05 \text{ in}$$



Aerial View Lot 11-A
Monticello DR.

RT 70 to RT 97 NORTH
 1st RT ON MONTECELLO
 TURN LEFT IMMEDIATELY ON
 GRAVEL DRIVE TO LAST
 LOT AT END OF CUL DE SAC
 781-6327



NOTE: THIS
 COPY
 FILE
 4-2
 THIS
 LAND
 MAY
 CON
 CAT

MONTECELLO AVE.

C1 6838 SEQUENCE NO. (DENV USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER A21507

ST/CO USE ONLY DATE Received

DATE WELL COMPLETED

Depth of Well 209 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" 10-92-0105

OWNER Spic Knall last name Samuel first name STREET OR RFD Villa Monticello Dr TOWN Cooksville SUBDIVISION Villa Monticello SECTION LOT 11

WELL LOG Not required for driven wells STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), Check if water bearing. Includes handwritten entries: SAND Stone 0 23, GRAY MICHA Rock 23 205.

GROUTING RECORD WELL HAS BEEN GROUTED (Y) (N) TYPE OF GROUTING MATERIAL CEMENT (CM) BENTONITE CLAY (BC) NO. OF BAGS 7 NO. OF POUNDS 658

CASING RECORD casing types insert appropriate code below ST CO STEEL CONCRETE PL OT PLASTIC OTHER

MAIN CASING TYPE ST Nominal diameter top (main) casing (nearest inch) 6 Total depth of main casing (nearest foot) 28

OTHER CASING (if used) diameter inch depth (feet) from to

SCREEN RECORD screen type or open hole insert appropriate code below ST BR HO STEEL BRASS OPEN HOLE PL OT PLASTIC OTHER

DEPTH (nearest ft.) H0 27 205 SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

OEP USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q TELESCOPE CASING LOG INDICATOR OTHER DATA

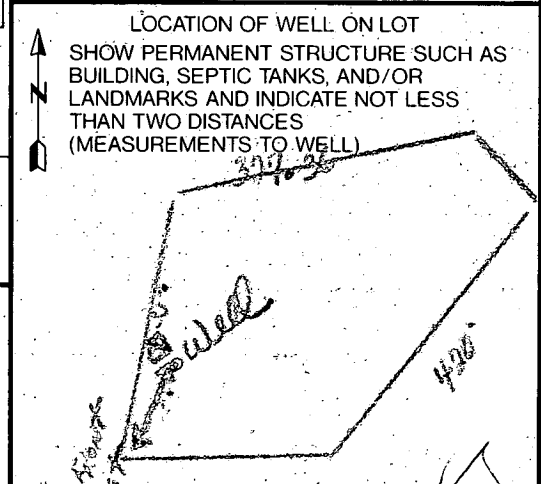
PUMPING TEST HOURS-PUMPED (nearest hour) 3 PUMPING RATE (gal. per min. to nearest gal.) 7 1/2 METHOD USED TO MEASURE PUMPING RATE Bucket WATER LEVEL (distance from land surface) BEFORE PUMPING 31 WHEN PUMPING 56 TYPE OF PUMP USED (for test) A air, P piston, T turbine, C centrifugal, R rotary, O other, J jet, S submersible

PUMP INSTALLED DRILLER WILL INSTALL PUMP YES (NO) IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE: CAPACITY: GALLONS PER MINUTE (to nearest gallon) PUMP HORSE POWER PUMP COLUMN LENGTH (nearest ft.) CASING HEIGHT (circle appropriate box and enter casing height) LAND SURFACE (nearest foot)

CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL" CONSTRUCTION AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS IDENT. NO. 228 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)



APPLICATION

PERCOLATION TESTING

A 21507
P _____
DISTRICT 4TH
DATE 3-9-88

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE. 461-9933

REQUEST MOUND SYSTEM TEST

***LOT HAD BEEN PRE-PERKED 1/2/88 BY OLEN KETTERMEN. RESULTS: 1st HOLE 6 FEET TO ROCK SHELF; 2nd HOLE ROCK SHELF 8 FEET; 3rd HOLE LOOSE CLAY.

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER WILLIAM JESTES

ADDRESS 14634 MONTICELLO AVE COOKSVILLE MD PHONE 489-4809

PROSPECTIVE BUYER DEBBY JRSTES

ADDRESS 5934 SETTER DR BALTIMORE MD 21227 PHONE 796-4721 w) 465-7700

PROPERTY LOCATION:

SUBDIVISION FORSYTHE ESTATES LOT NO. 11-A

ROAD AND DESCRIPTION _____

TAX MAP 8 PARCEL # 335

SIZE OF LOT 2.20 TYPE BLDG SINGLE FAMILY DWELLING
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

William M. Jestes
(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING 4-22-88 Approved for MOUND OVER ROCK - 30-60 min
PERC when STATE APPROVED S. Alu

HD-216

THIS IS NOT A PERMIT

ATTACHED: TOPOGRAPHY PLAT, TAX MAP, AERIAL VIEW OF PROPERTY, GROUNDS PHOTOS

APPLICATION

PERCOLATION TESTING

A _____

P _____

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 461-9933

DISTRICT _____

DATE _____

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER _____

ADDRESS _____ PHONE _____

PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. _____

ROAD AND DESCRIPTION _____

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG _____
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

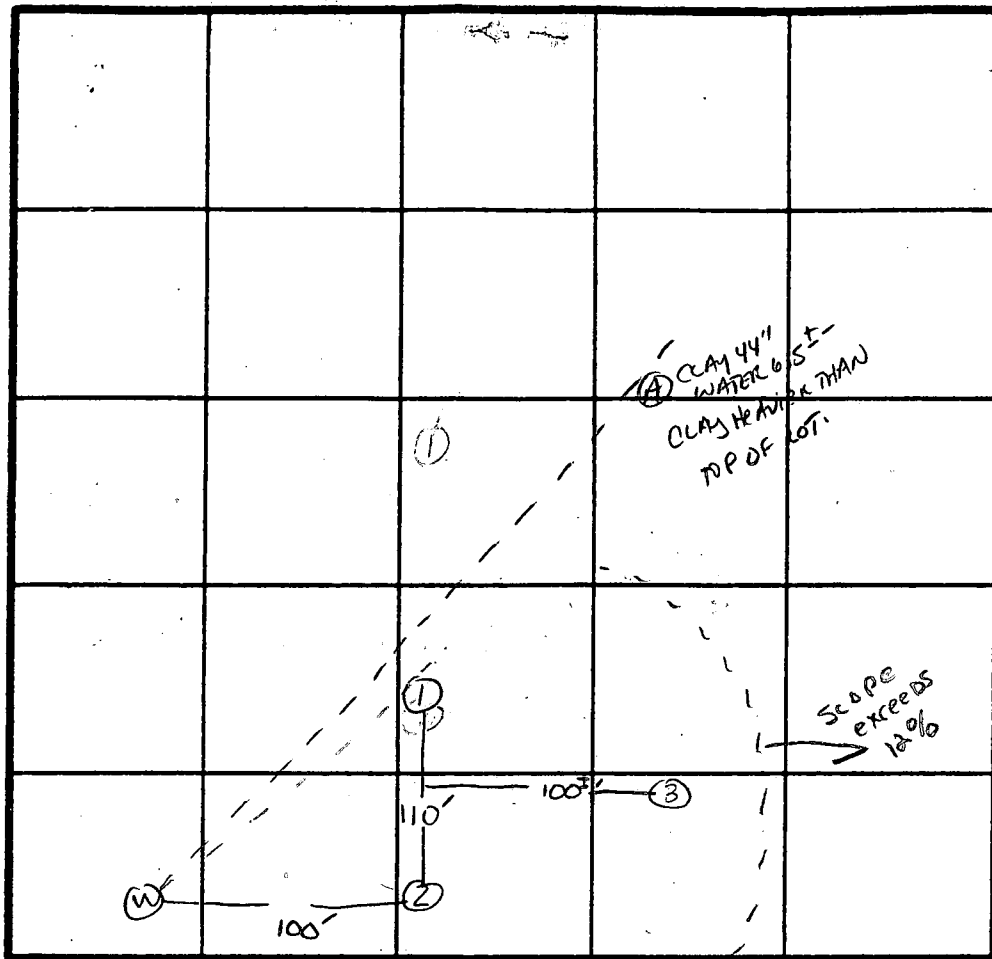
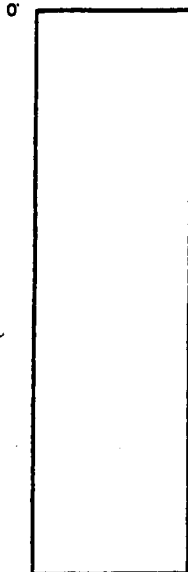
REASONS FOR REJECTION OR HOLDING _____

HD-216

THIS IS NOT A PERMIT

A21507

SOIL PROFILE



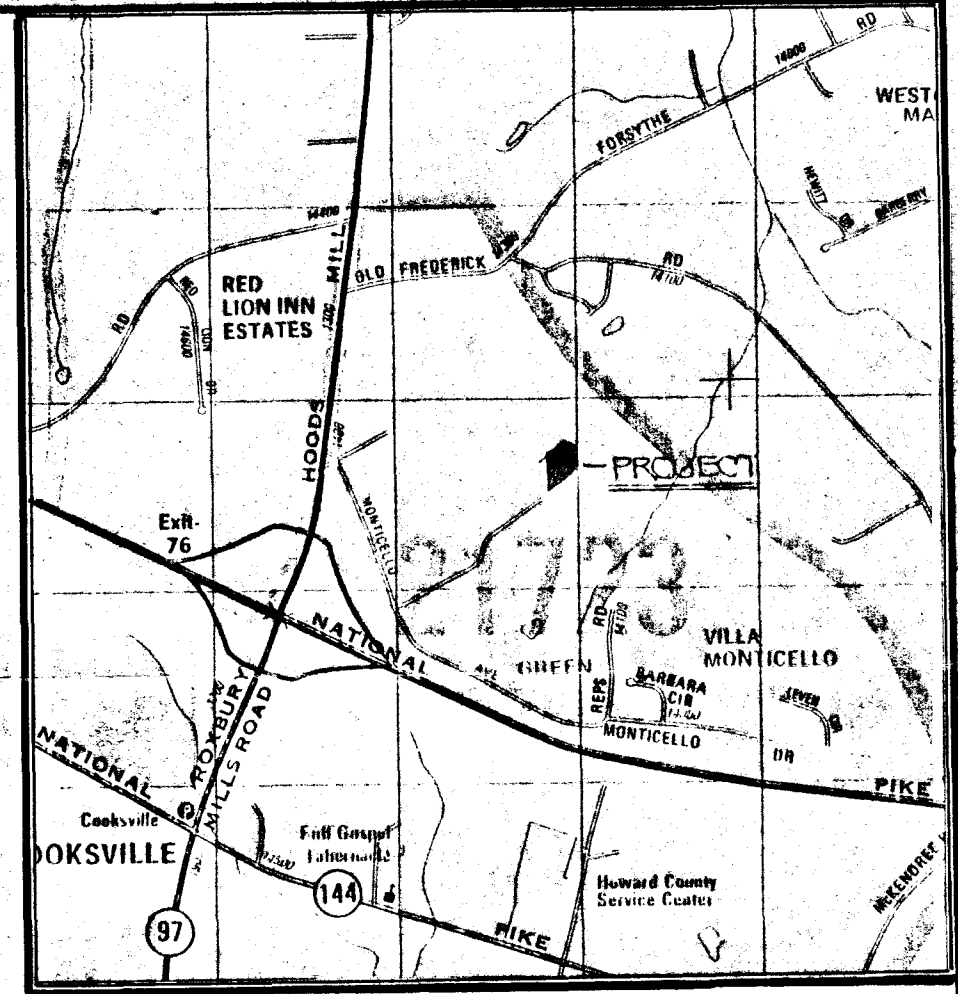
INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.
TO MONTICELLO DR. RIGHT OF WAY

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/25/88	1 INFILTRATION 1 V	22" 8'4"	11:31	12:30	12:30	1:31	1ST 59 MIN 2ND 61 MIN
	CONVENT	18"	11:39	11:47	11:47	12:00	13 MIN
	2 INFILTRATION	9"	1:32	1:38	1:38	1:48	1ST 6 MIN 2ND 10 MIN
	2V	STRUCTURED ROCK AT		31-33"			
	3 CONVENT.	16"	11:47	11:52	11:52	11:59	7 MIN
	3 V	STRUCTURED ROCK AT		29"			
	3 INFILTRATION	9"	1:52	1:56	1:56	2:00	1ST 4 MIN 2ND 4 MIN

4/25/88 OK FOR MOUND OVER ROCK 30-60 MIN PORE WHEN STATE APPROVED. SAME SEE MORE SPECIFIC SOIL DESCRIPTION SHEETS FOR PROFILES

TYPE OF SOIL Chester Gravelly loam

TESTED BY S. Abel ALSO PRESENT MS. Jesses
M.L. Jesses (FATHER)

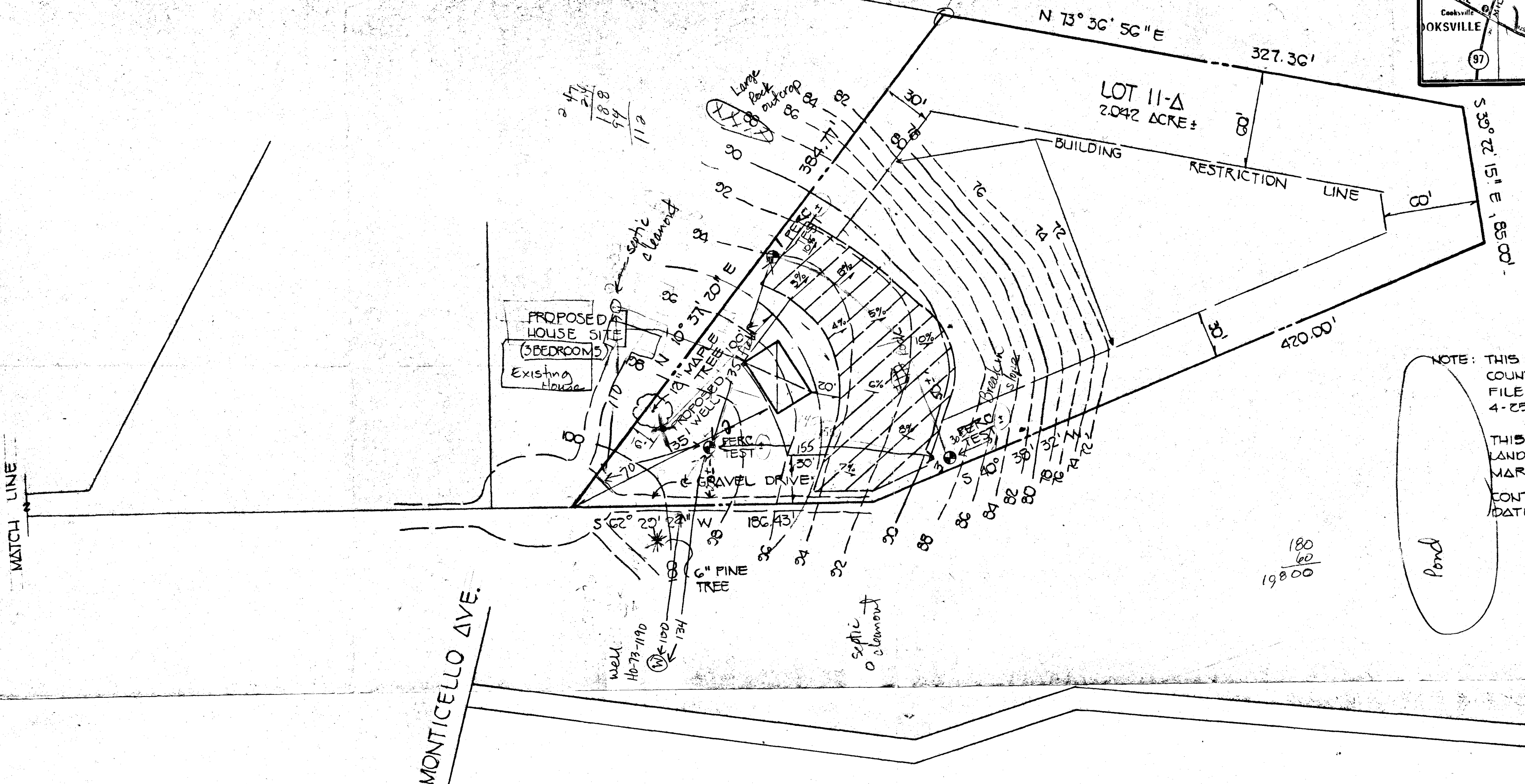
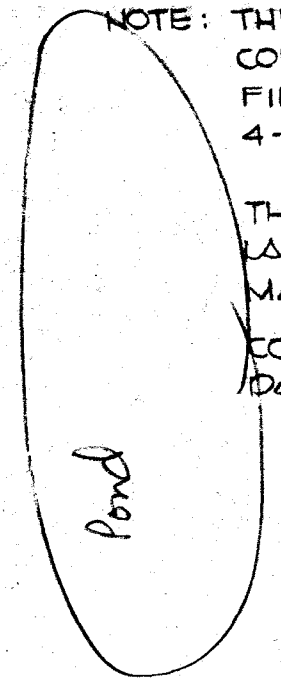


VICINITY MAP
 SCALE: 1" =
 Spicknall
 14618 Monticello Dr.
 off 97 near 70

A 21507

NOTE: THIS PLAN SUBJECT TO HOWARD COUNTY HEALTH DEPARTMENT FILE NUMBER A-21507 (TEST DATE 4-25-88)

THIS PROPERTY IS RECORDED IN LAND RECORDS OF HOWARD COUNTY MARYLAND AS LIBER 1918 FOLIO 714 CONTOURS BASED ON ASSUMED DATUM.



PLAN
 SCALE 1" = 50'

11:00am
 Mon. 1-28-91
 Meet K. Fralic
 on site to discuss
 perc locations
 well & septic areas.

PROPERTY OF
DEBBIE JESTES
 LOT 11-A FORSYTHE ESTATES
 TAX MAP 5 BLOCK 12 PARCEL 335
 4th ELECTION DISTRICT HOWARD CO. MARYLAND
 SCALE: AS SHOWN DATE: JANUARY 10, 1991

FISHER COLLINS & CARTER, INC
 CIVIL ENGINEERING CONSULTANTS &
 LAND SURVEYORS
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043
 (301) 461 - 2855

SOIL DESCRIPTION

Forsythe Estates Lot 11A

NAME Jestes - Busbee COUNTY Howard FILE NO A 21507
 SOIL MAP UNIT Chester gravelly lm MAP SYMBOL Cg DATE 2-27-91
 GEOLOGIC MATERIAL schist ELEVATION _____ GRID NO _____ E
 NO. A DESCRIBED BY Jane E. Nadeau _____ N

Horizon	Depth in.	Color		Texture	Structure		% Rock Fragments	Notes (Moisture, Density, Biopores, Seepage)
		Matrix	Mottles		Grade	Type		
O	0-8"	5YR 3/3	N/A	Sic1	Fine	Subang. Blocky	<5%	Roots, gravel, pores, damp Dark brown
A1	8"-19"	10YR 4/4	N/A	S.sil	Fine	Subang. Blocky	<5%	Root hairs
B	19"-32"	7.5YR 4/6	N/A	SSic1	Fine	Blocky	<15%	Some broken rock frags, blocky <15%, schist
C	32"-68"	2.5YR 4/8	N/A	S.sil	Med.	Granular	<60%	Large subangular ^{weathered} rock frags blocky, schist <60%, iron stained lenses of clay lam.
	68"							Refusal

LANDSCAPE

Position

Summit _____ Depression _____
 Shoulder X Upland _____
 Sideslope _____ Terrace _____
 Footslope _____ Floodplain _____

Slope

Percent _____
 Shape Convex

SOIL DRAINAGE CLASS

ED _____ MWD _____ PD' _____
 WD X SPD _____ VPD _____

WATER TABLE

N/A

LIMITING ZONE

32 in to 68 in
Rocky soils

SOIL CLASSIFICATION

S si c1

TEST DATA

NAME <u>Jestes - Bushel</u>	FILE NO. <u>A 21507</u>
LOCATION <u>Monticello Drive</u>	COUNTY <u>Howard</u>
<u>Forsythe Estates Lot-11A</u>	DATE <u>2-27-91</u>
RECORDED BY <u>Jane E. Nadeau</u>	GRID _____ E

HOLE NO.	TEST NO.	DEPTH	CLOCK TIME	ELAPSED TIME	MEASUREMENT	REMARKS (Method, Moisture, Biopores)	
(A)	1	1 1/2 in	11:40		1 1/2 in	1 1/2 in below original grade - test depth Strong br s soil, fine, blocky structure	
		1 2 in	11:53	5 min	1 1/2 in		
		1 2 1/4 in	11:54	7 min	1 1/4 in		
	2	11 in	11:56	5 min	—	Infiltrometer set 7 inches into soil	
		1 2 in	12:01	5 min	1 in		
	3	10 3/4 in	12:05		—		
		11 3/4 in	12:10	5 min	1 in		
	4	10 5/8 in	12:12		—	5.4	
		11 3/4 in	12:18	6 min	1 1/8 in	5 5.3	
	5	10 5/8 in	12:21		—	5.7	
		11 5/8 in	12:27	6 min	1 in	5	
		13 5/8 in	12:38	17 min	3 in		
							5.3 min/in

SOIL DESCRIPTION

NAME Jestes - Busbei Forsythe Estates Lot-11A COUNTY Howard FILE NO A 21507
 SOIL MAP UNIT Chester gravelly lm MAP SYMBOL Cg DATE 2-27-91
 GEOLOGIC MATERIAL Schist ELEVATION _____ GRID NO _____ E
 NO. B DESCRIBED BY Jane E. Nadeau _____ N

Horizon	Depth in.	Color		Texture	Structure		% Rock Fragments	Notes (Moisture, Density, Biopores, Seepage)
		Matrix	Mottles		Grade	Type		
O	0-10"	2.5YR 3/2	N/A	Cs1l	Coarse	Blocky	< 5%	Organics, root hairs, < 3% gravel, pore 5, Damp
A1	10"-16"	10YR 3/4	N/A	Cs1l	Med	Subang. Blocky	< 5%	Root hairs, < 5% broken rx frags. schist, damp
B	16"-25"	7.5YR 4/6	N/A	Ss1cl	Fine	Blocky	< 5%	Schist frags < 5%, damp
C	25"-67"	5YR 4/6	N/A	Ss1l	Med	Granular	< 40%	Clay lenses, micaceous weathered schist frags, < 40%, structured rx with near vertical bedding, iron stains
	67"							Refusal

LANDSCAPE

Position

Summit X Depression _____
 Shoulder _____ Upland _____
 Sideslope _____ Terrace _____
 Footslope _____ Floodplain _____

Slope

Percent _____
 Shape Convex

SOIL DRAINAGE CLASS

ED _____ MWD _____ PD _____
 WD X SPD _____ VPD _____

WATER TABLE

N/A

LIMITING ZONE

25 in to 67 in
Rocky soils

SOIL CLASSIFICATION

Ss1cl

TEST DATA

NAME <u>Jestes - Busbei</u>	FILE NO <u>A 21507</u>
LOCATION <u>Monticello Road</u>	COUNTY <u>Howard</u>
<u>Forsythe Estates Lot-11A</u>	DATE <u>2-27-91</u>
RECORDED BY <u>Jane E. Nadeau</u>	GRID _____ E N

HOLE NO.	TEST NO.	DEPTH	CLOCK TIME	ELAPSED TIME	MEASUREMENT	REMARKS (Method, Moisture, Biopores)
(B)	1	12 1/2 in	1:45	—		18 1/2 inches below grade - test depth Infiltrator set 5 1/2 inches into soil. Single ring infiltrator. 11 11 11.5 12 12.4 12.4 = 6 <div style="border: 1px solid black; padding: 5px; display: inline-block;">11.7 min/inch</div> Strong brown ss cl & 15% rock fragments
		13 1/2 in	1:56	11 min	1 in	
	2	12 1/2 in	1:58	—		
		13 1/2 in	2:09	11 min	1 in	
	3	12 3/4 in	2:11	—		
		13 3/8 in	2:24	13 min	1 1/8 in	
	4	12 1/4 in	2:26	—		
		13 1/4 in	2:38	12 min	1 in	
	5	12 1/2 in	2:40	—		
		13 5/8 in	2:54	14 min	1 1/8 in	
	6	12 3/8 in	2:57	—		
		13 1/2 in	3:11	14 min	1 1/8 in	

14-501

N 73° 36' 56" E

327

LOT 11-Δ
2.042 ACRE ±

BUILDING

RESTRICTION

PROPOSED
HOUSE SITE
(3 BEDROOMS)

N 10° 17' 20" E

PROPOSED
TREE

PERC
TEST

GRAVEL DRIVE

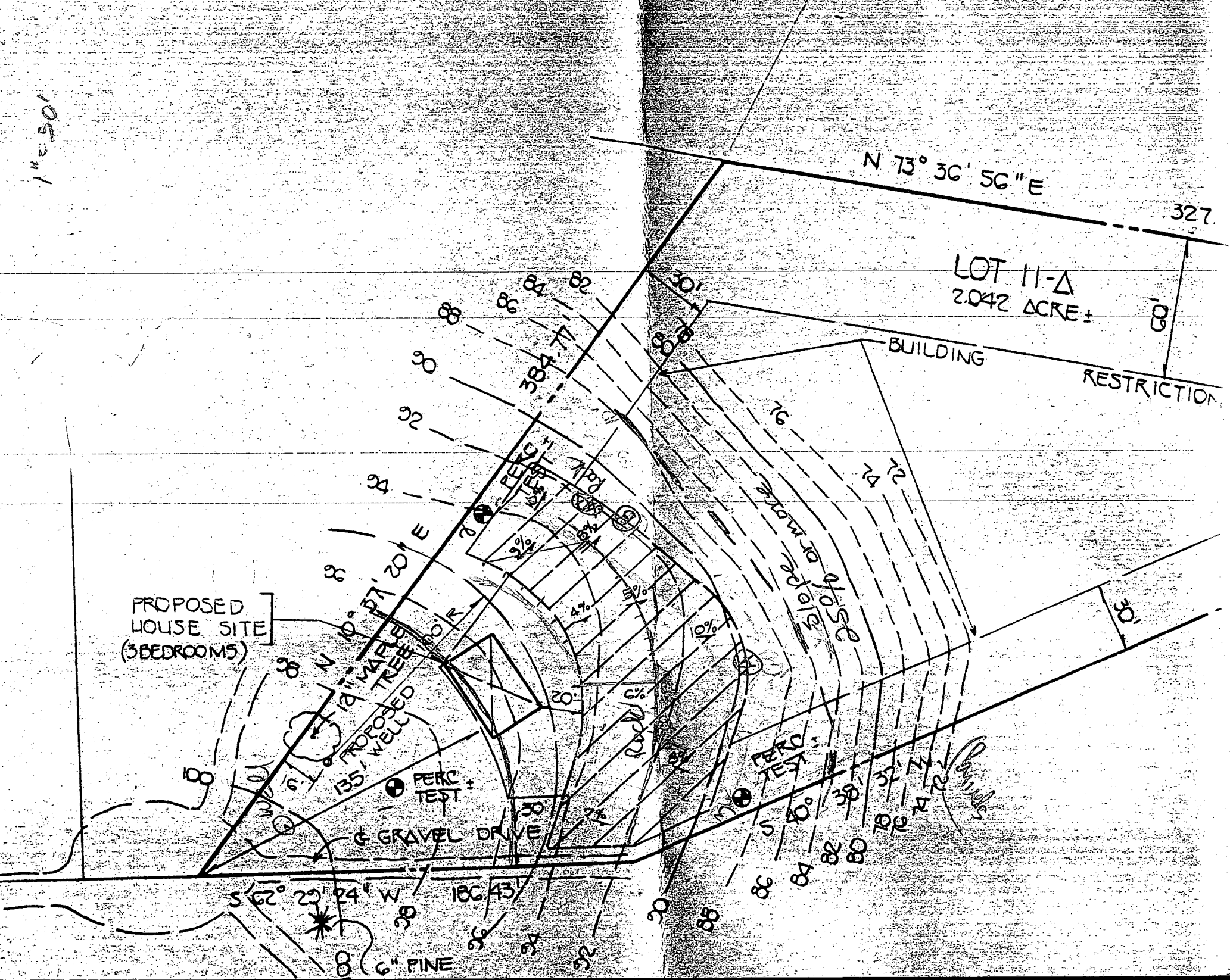
S 62° 23' 24" W 186.43'

6" FINE

3% slope or more

PERC
TEST

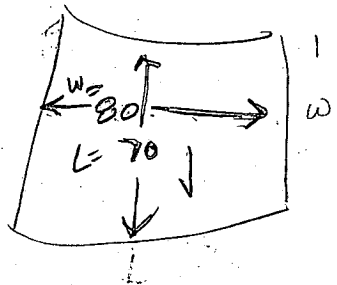
Handwritten signature



375 sq ft absorption bed

Length 45 ft = D

$$A = \frac{375}{45} = 8.3 \text{ ft}$$



$$D = 48 \text{ in} - 29 \text{ in} = 19 \text{ in} (1.6 \text{ ft})$$

$$E = 8.2 + 19 \text{ in} = 27.2 \text{ in} = (2.25 \text{ ft})$$

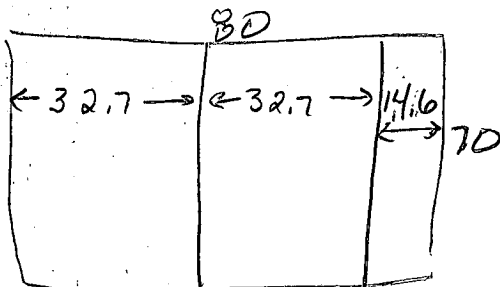
$$K = (23 + 28) \cdot 3 = 153 \text{ in} (12.8 \text{ ft})$$

$$J = (22 + 19) \cdot 3 \times 0.8 = 98.4 \text{ in} (8.2 \text{ ft})$$

$$I = (22 + 27.2) \cdot 3 \times 1.32 = 194 \text{ in} (16.2 \text{ ft})$$

$$W = 392 \text{ in} (32.7 \text{ ft})$$

$$L = 846 \text{ in} (70.5 \text{ ft})$$



Forsythe Estates Lot-11A

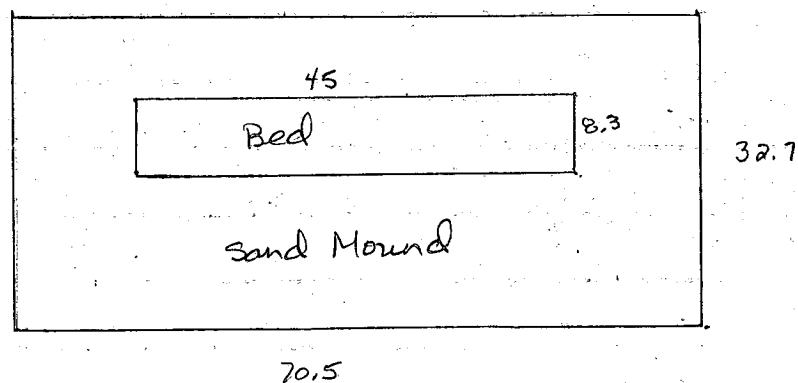
JANE,

I ADDED THE
NOTE IN THE
SIGNATURE BLOCK
CALL ME IF YOU
HAVE ANY QUESTIONS

CHUCK CROVO
461-2855

3 bedroom - 450 gpd - 375 sqft absorptive area

- A = 8.3 ft bed width
- B = 45 ft bed length
- D = 19 in upslope sand fill depth
- E = 27 in downslope sand fill depth
- F = 10 in total bed depth
- G = 12 in cap and topsoil at bed edge
- H = 18 in cap and topsoil at bed center
- I = 194 in downslope setback (16.2 ft)
- J = 98.4 in upslope setback (8.2 ft)
- K = 153 in sideslope setback (12.8 ft)
- L = 846 in mound length (70.5 ft)
- W = 392 in mound width (32.7 ft)



1" = 20'

SOIL DESCRIPTION

NAME JESTES COUNTY HOWARD FILE NO. 21507

SOIL MAP UNIT _____ MAP SYMBOL Cg DATE 4-25-88

GEOLOGIC MATERIAL SHIST Elevation _____ GRID No. _____

No. 1 DESCRIBED BY S. C. W.

Horizon	Depth in.	Color		Texture	Structure		% Coarse Fragments	Notes (Moisture, Density, Consistence, Biopores, Scapex)
		Matrix	Mottles		Grade	Type		
O	SURFACE							GRASS + WELL DECOMP ORGANIC M.
A	0-3"	STRONG BROWN	N/A	SILT LOAM	Fine	GRANULAR	15-25% QUARTZ	STICKY, MOIST, MANY ROOTS
B ₁	3'-40"	STRONG Yell. Red	N/A	CLAY LOAM	COARSE	SUBANG. BLOCKY	25-40% QUARTZ	STICKY, MOIST, FEW ROOTS MANY QUANTIZE FRAGS.
C	40+"	Yell. SA	N/A	LOAM	MICACEOUS	SAPROLITE	50%	STRUCTURED SAPROLITE, HIGHLY MICACEOUS

LANDSCAPE FEATURES

Upland/Marine Summit
 Bench _____ Shoulder _____
 Terrace _____ Sideslope _____
 Floodplain _____ Footslope _____
 Depression _____ Toeslope _____
 Slope % 0-2 Shape Width N 100X100

SOIL DRAINAGE CLASS

ED _____ MWD _____ PD _____
 WD SPD _____ VPD _____

WATER TABLE

Type _____
 Depth N/A
 Misc. _____

GEOLOGIC MATERIAL

Recent Alluvium _____
 Old Alluvium _____
 Coastal Plain Sediments _____
 Residuum
 Colluvium _____
 Eolian _____
 Misc. _____

LIMITING HORIZON

Depth _____
 B-Horizon _____
 Fragipan _____
 C-Struct. Saprolite _____
 Cr-Struct. Saprolite
 C-Horizon _____
 R-Bedrock
 Other _____

SOIL DESCRIPTION

NAME JCSTES COUNTY HOWARD FILE NO. 21507

SOIL MAP UNIT Chester gravelly loam MAP SYMBOL Cg DATE 4-25-88

GEOLOGIC MATERIAL Siltst Elevation _____ CRID No. _____

No. Hole NO 2 FORSYTHE EST LOT 11A DESCRIBED BY S. AGL

Horizon	Depth in.	Color		Texture	Structure		% Coarse Fragments	Notes (Moisture, Density, Consistence, Biopores, Seepage)
		Matrix	Mottles		Grade	Type		
O	Surface							Grass + well decomp. organic M.
A	0-4"	Yellow Brown	N/A	Silt LOAM	Fine	GRANULAR	20-30% QUARTZITE	MOIST, STICKY, Few roots SMOOTH BOUNDARY
B ₁	4"-16"	Yellow BR	N/A	Silty CL LOAM	COARSE	SUBANG. Blocky	30-40%	SMOOTH BOUNDARY, MOIST
B ₂	16"-23"	Brown	N/A	Silt LOAM	COARSE	SUBANG. blocky	20-25%	Few red yellow clay films, STICKY Dry
C	23"+	Yell. BR.	N/A	LOAM	NONE		50+%	Highly structured → Bed rock micaceous

LANDSCAPE FEATURES

Upland/Marine _____ Summit _____
 Bench _____ Shoulder _____
 Terrace _____ Sideslope _____
 Floodplain _____ Footslope _____
 Depression _____ Toeslope _____
 Slope % _____ Shape Width _____

SOIL DRAINAGE CLASS

ED _____ MWD _____ PD _____
 WD _____ SPD _____ VPD _____

WATER TABLE

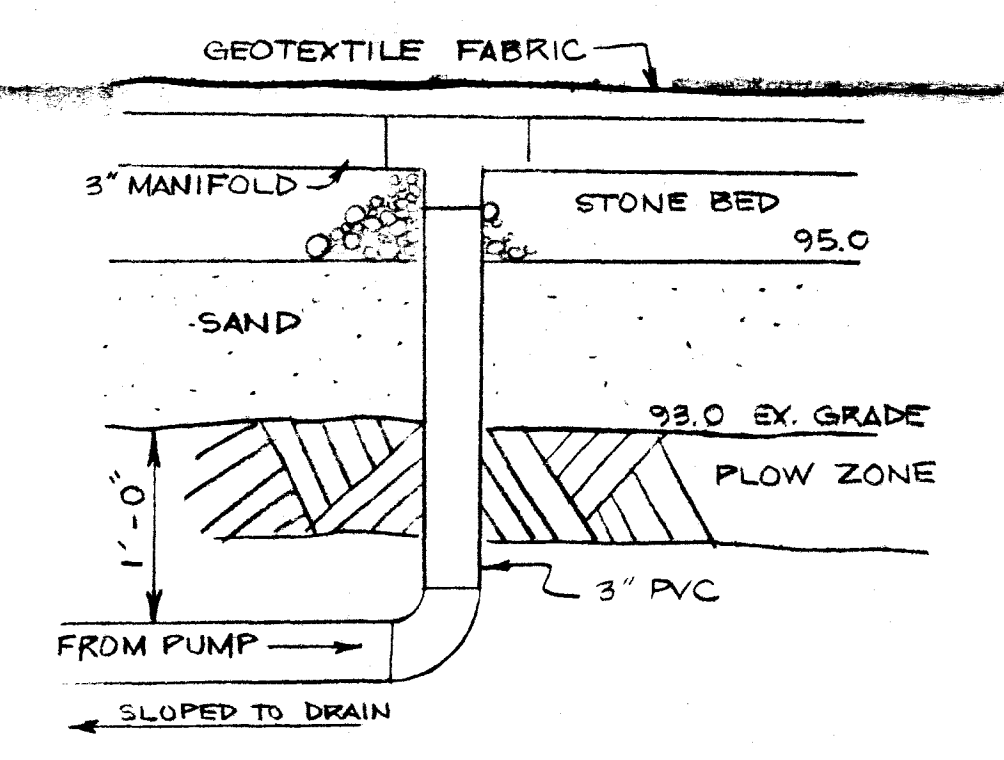
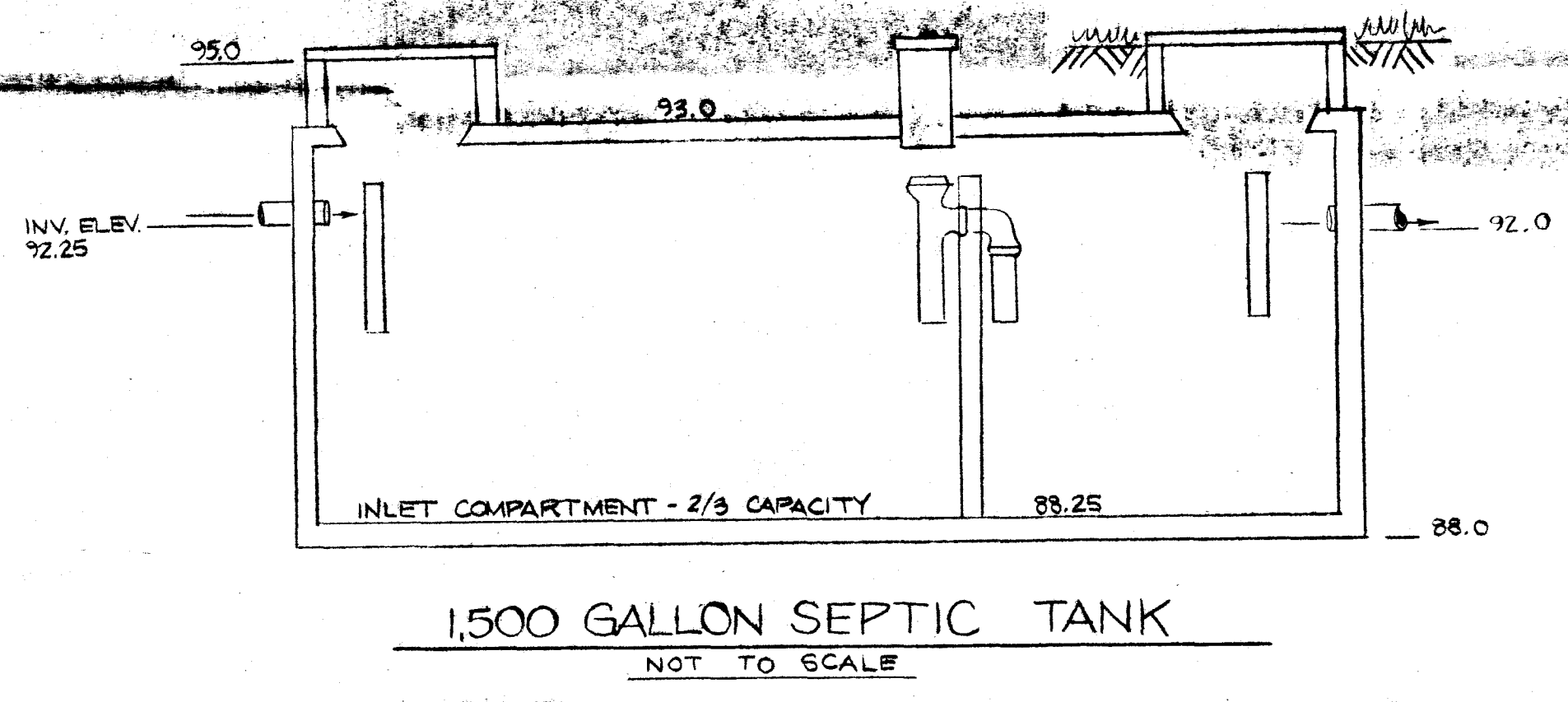
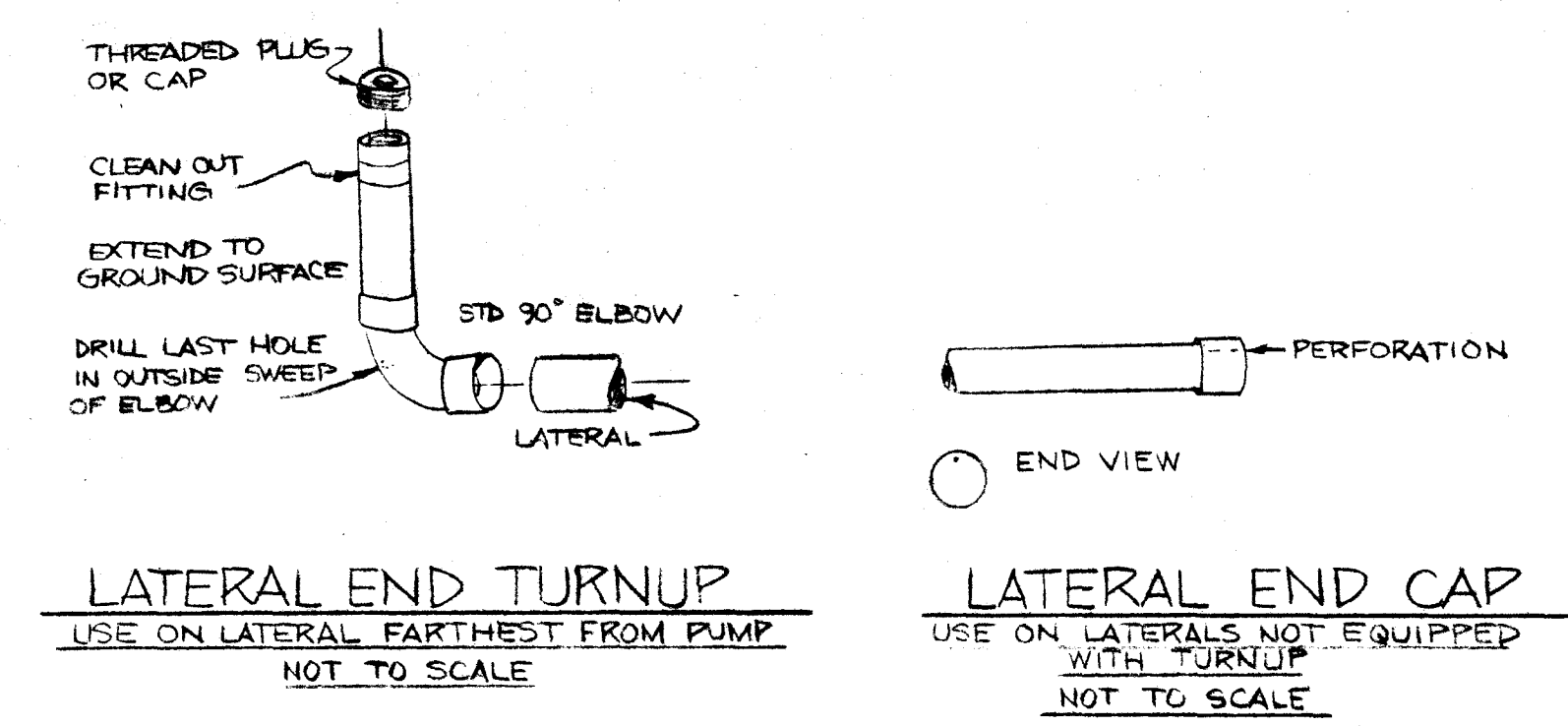
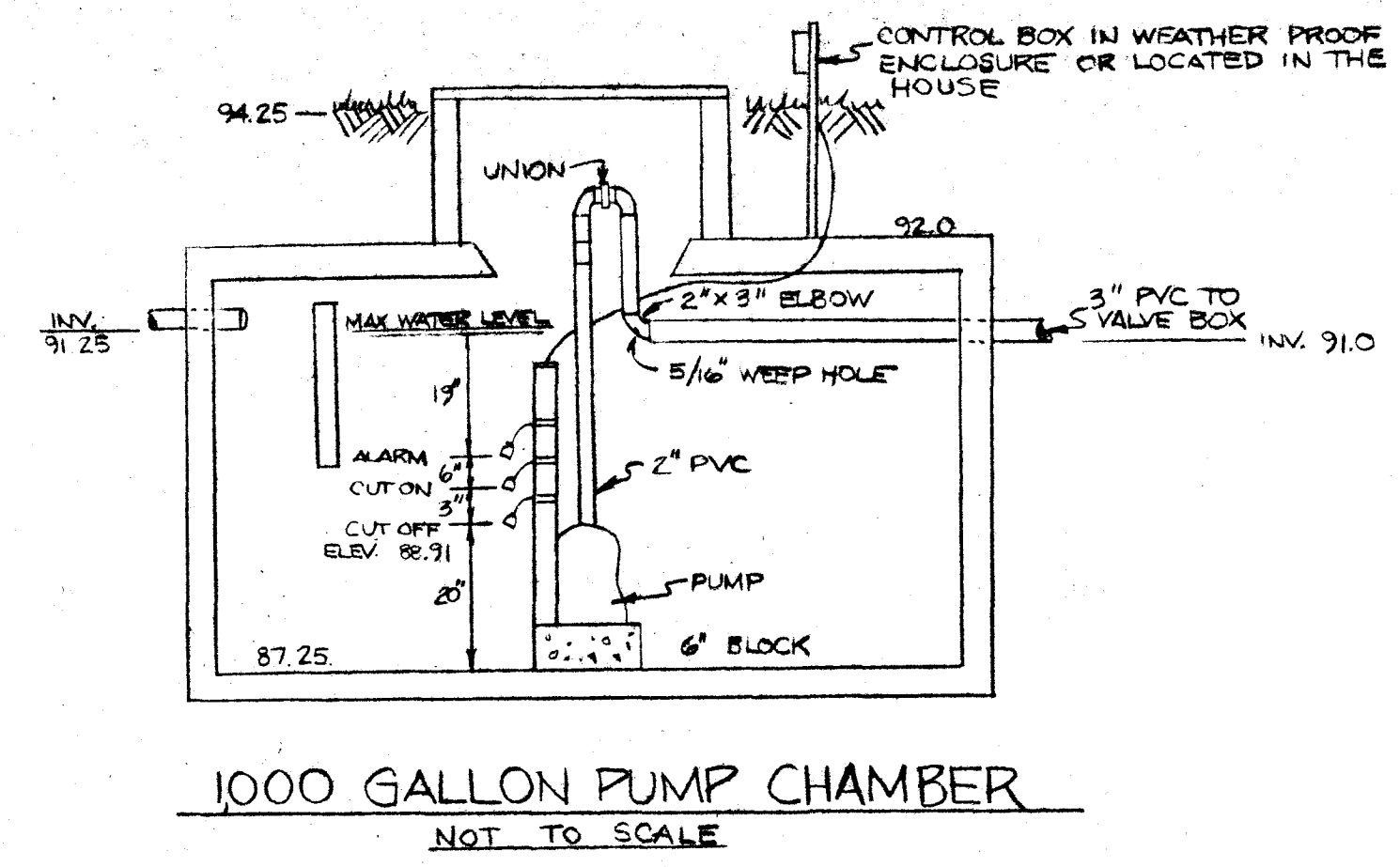
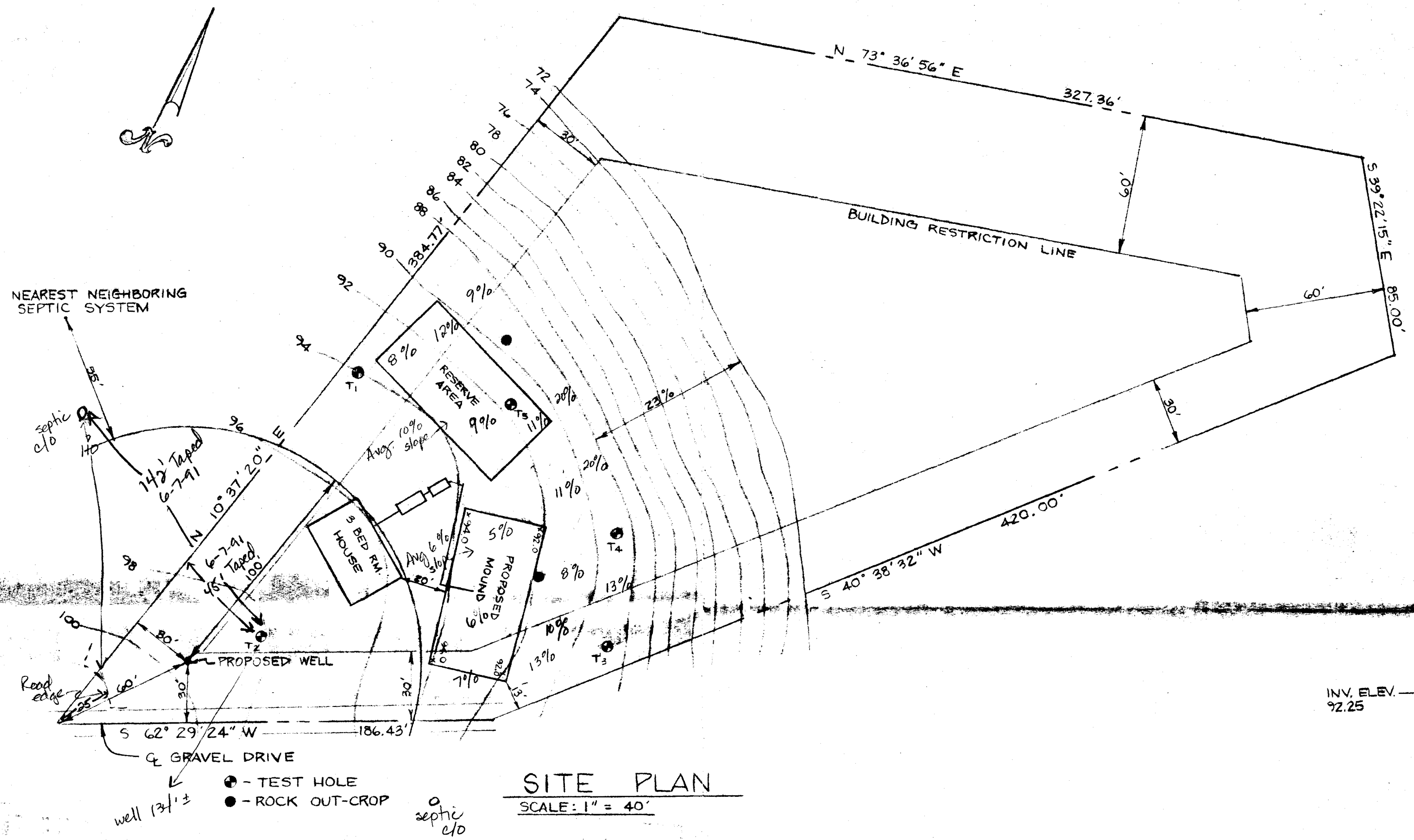
Type _____
 Depth _____
 Misc. _____

GEOLOGIC MATERIAL

Recent Alluvium _____
 Old Alluvium _____
 Coastal Plain Sediments _____
 Residuum _____
 Colluvium _____
 Eolian _____
 Misc. _____

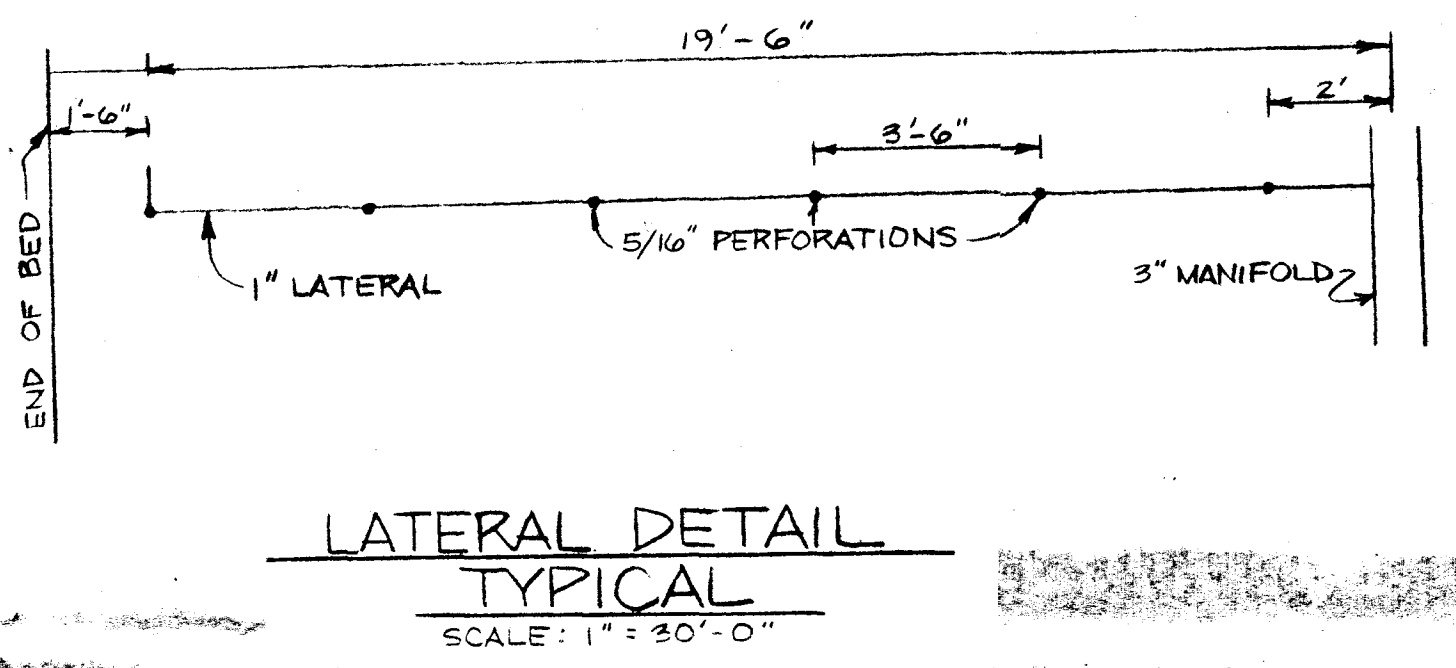
LIMITING HORIZON

Depth _____
 B-Horizon _____
 Fragipan _____
 C-Struc. Saprolite _____
 Cr-Struc. Saprolite _____
 C-Horizon _____
 R-Bedrock _____
 Other _____

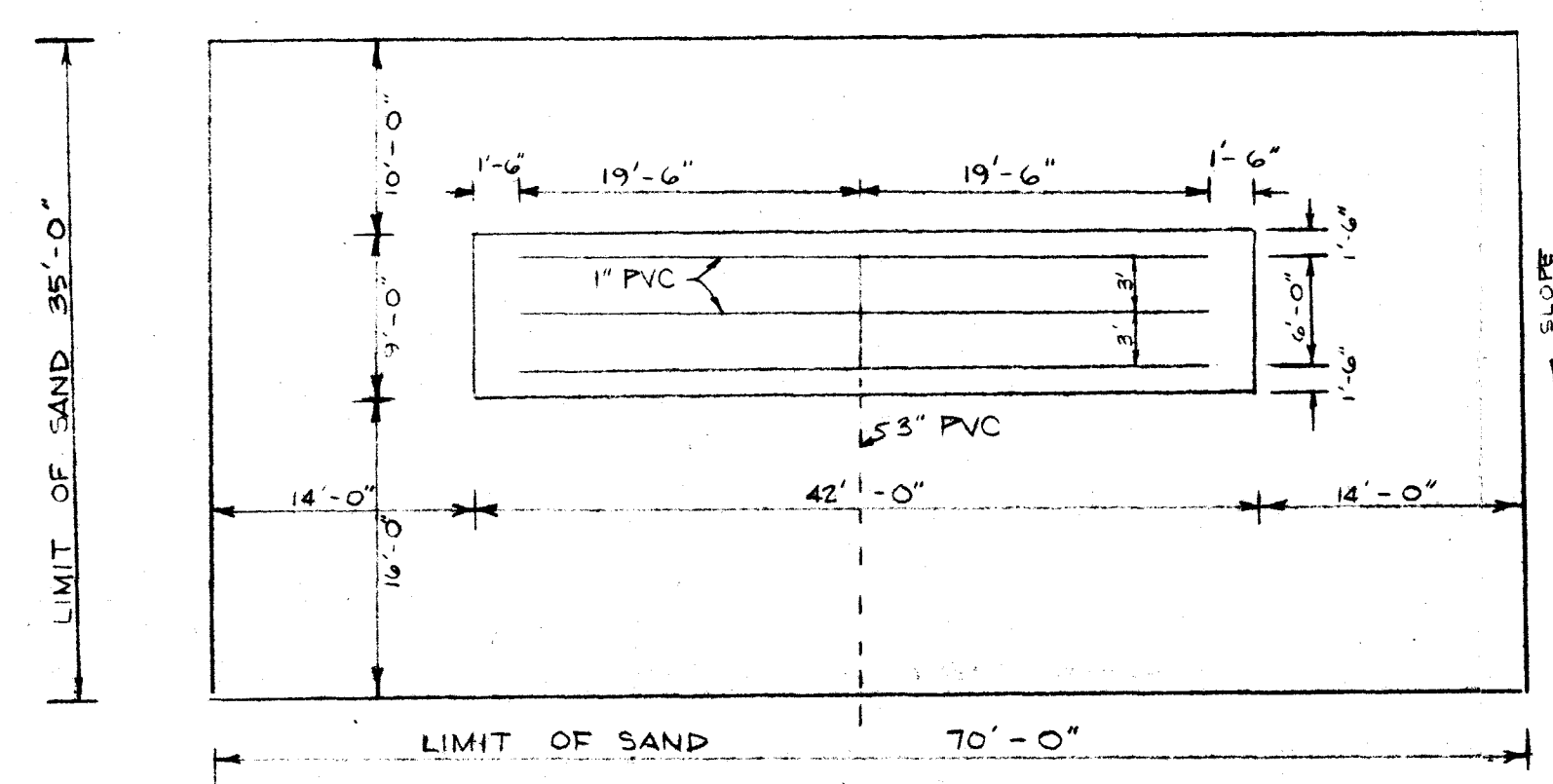
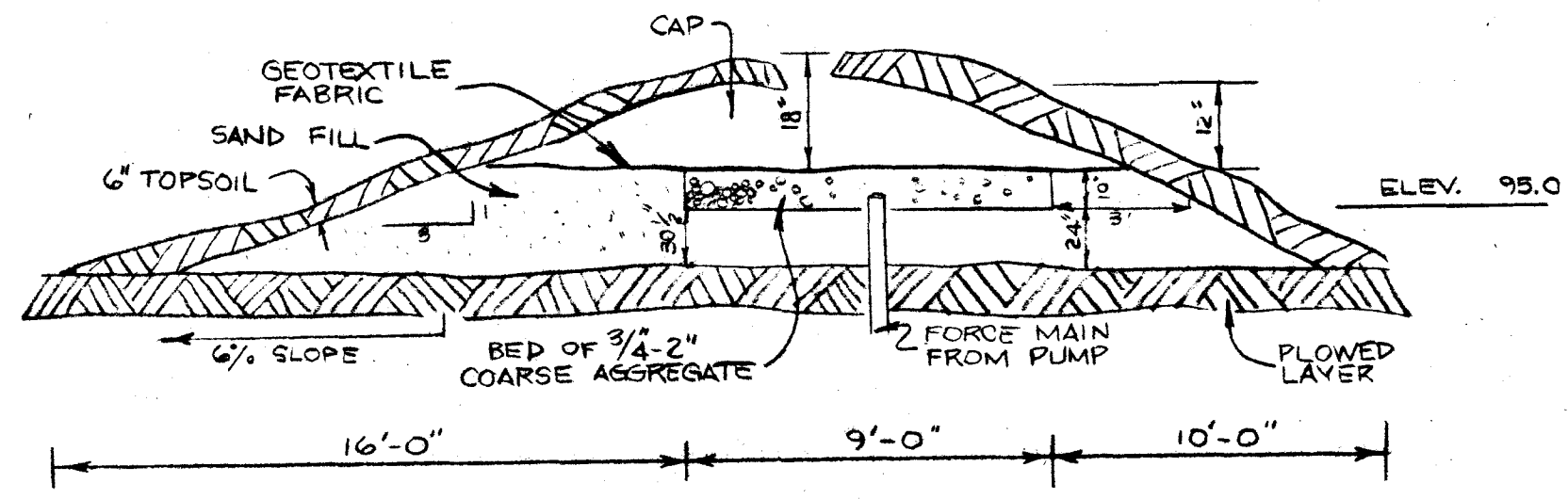
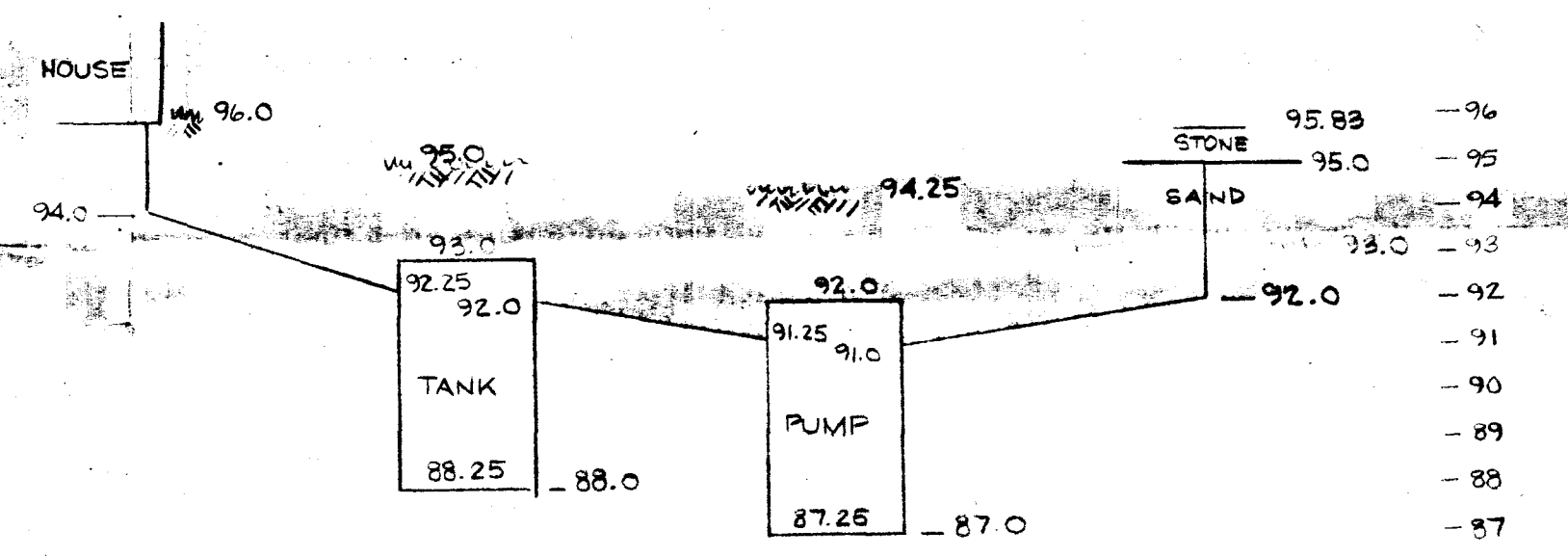


DESIGN CRITERIA

3 BEDROOM HOUSE
DESIGN FLOW - 450 GPD
1-1500 GALLON COMPARTMENTED SEPTIC TANK
1-1000 GALLON PUMP CHAMBER
75 GALLON DOSE @ 60 GPM
BED AREA - 9' x 42' = 378 SQ. FT.
MOUND AREA - 25' x 70' = 2450 SQ. FT.
TDH = 10.6'



Approved for private water and private sewer systems,
Howard County Health Department.



A-21507

S/E ENGINEERING, INC.
WESTMINSTER, MARYLAND 21157

SCALE AS SHOWN APPROVED BY JDC DRAWN BY A.E.S.
DATE: MARCH, 1991
DEBBIE JESTER LOT 11A FORSYTHE ESTATES
MONTICELLO DRIVE HOWARD COUNTY, MD.
SAND MOUND SYSTEM DRAWING NO. 1 OF 1

3/13/91

6/27/94 9:30-10:00

REGION _____

AREA _____ RATING _____

ACKNOWLEDGMENT AND CONTROLS	DATE

Howard County Department of Health
BUREAU OF ENVIRONMENTAL HEALTH

DISPOSITION	DATE

RECORD OF INVESTIGATION

LOCATION 14610 Monticello Dr ZIP 21723
 OWNER Frank Bavis ADDRESS same PHONE 549-3314
 OCCUPANT ADDRESS _____ PHONE 489-5122

COMPLAINANT same ADDRESS _____ PHONE _____

REASON FOR INVESTIGATION smelling "sewer gas" in vicinity of neighbor @ Forsythe Estates w/new sand mound; no sewage discharges noted by complainant in neighborhood

RECEIVED BY M. Ritkin DATE 6/23/94 ASSIGNED TO _____ DATE _____

DATE OF INVESTIGATION _____ TIME _____ WEATHER _____

REPORT ~~that~~ Complainant would like to be present for inspection - best time is Mon 9:30-10:00 a.m.
Complainant also has fish pond; believes odor may be emanating from septic tank installed w/sand mound

6/24/94 Noon Examination of Sand Mound SDS @ 14618 Monticello Drive.
No odor of sewage near ST or Pump Chamber. Grounds ^{+S7} Freshly trowel.
No evidence of seepage around sand mound, No water in either observation pipes.
Some Brown and dead grass on mid sides of sand mound (due to summer drought)
There is a faint odor occasionally detected, unable to identify source;
Smells more like fermenting grass clippings or weed control spray - Not like sewage. only identifiable seepage was near small pond on complainant's lot (probably a natural spring). I spoke with Mr + Mrs Bavis. He admits odor is rarely noticeable. He'll call us next time odor is strong for reevaluation. Affinity.

7/6/95 NO FURTHER COMPLAINTS - FILE CLOSED

DATE SUBMITTED _____ SANITARIAN _____